

ATTACHMENT 1



CITY OF LINCOLN

WATER, WASTEWATER, AND SOLID WASTE RATE STUDY – REVISED



October 14, 2013



HF&H Consultants, LLC



CITY OF LINCOLN

600 6TH STREET
LINCOLN, CA 95648

**WATER, WASTEWATER, AND SOLID WASTE RATE STUDY
PUBLIC HEARING FINAL REPORT**

October 14, 2013

HF&H CONSULTANTS, LLC

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October 14, 2013

Mr. Steve Ambrose
Financial Analyst
City of Lincoln
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Lincoln, CA 95648

Subject: Water, Wastewater, and Solid Waste Rate Study – Revised Draft

Dear Mr. Ambrose:

HF&H Consultants, LLC, is pleased to submit this report that documents the updates to the City's water, wastewater, and solid waste rates. The report was revised to address public comments received at the October 8, 2013 City Council meeting. We specifically provided more information concerning transfers, capital improvements, and rate structure proportionality with the aim of explaining how rate payer money is being spent to support each of these three enterprises.

It has been a pleasure working with you and City Staff on this challenging project.

Very truly yours,

HF&H CONSULTANTS, LLC

John W. Farnkopf, P.E., Senior Vice President
Rick Simonson, C.M.C., Vice President
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TABLE OF CONTENTS

| | |
|--|-----------|
| 1. EXECUTIVE SUMMARY | 1 |
| 1.1 Study Purpose and Objectives | 1 |
| 1.2 Methodology | 1 |
| 1.3 Rate-Making Objectives..... | 2 |
| 1.4 Findings And Recommendations..... | 2 |
| 2. WATER RATES..... | 8 |
| 2.1 Background..... | 8 |
| 2.2 Revenue Requirement Projections..... | 8 |
| 2.3 Cost of Service Analysis | 12 |
| 2.4 Rate Design | 15 |
| 2.5 Comparison of Proposed Charges with Neighboring Agencies | 24 |
| 3. WASTEWATER RATES | 26 |
| 3.1 Background..... | 26 |
| 3.2 Revenue Requirement Projections..... | 26 |
| 3.3 Cost of Service Analysis | 31 |
| 3.4 Rate Design/Rate Increases | 34 |
| 3.5 Comparison of Proposed Charges with Neighboring Agencies | 35 |
| 4. SOLID WASTE RATES..... | 36 |
| 4.1 Background..... | 36 |
| 4.2 Revenue Requirement Projections..... | 36 |
| 4.3 Cost of Service Analysis | 41 |
| 4.4 Rate Design and Projected Rate Increases..... | 42 |
| 4.5 Comparison of Proposed Charges with Neighboring Agencies | 43 |
| APPENDIX A. WATER RATE MODEL | |
| APPENDIX B. SEWER RATE MODEL | |
| APPENDIX C. SOLID WASTE RATE MODEL | |

TABLE OF FIGURES

| | |
|--|----|
| Figure 1-1. Revenue Requirement Projections | 3 |
| Figure 1-2. FY 2013-14 Water Revenue Requirements | 3 |
| Figure 1-3. FY 2013-14 Sewer Revenue Requirements | 4 |
| Figure 1-4. FY 2013-14 Solid Waste Revenue Requirements | 4 |
| Figure 1-5. Summary of Projected Monthly Bills – Single Family Customers..... | 6 |
| Figure 1-6. Projected Average Monthly Single-Family Bills – All Services | 7 |
| Figure 1-7. Comparison of Average Monthly Single-Family Bills | 7 |
| Figure 2-1. Water Revenue Requirements..... | 9 |
| Figure 2-2. Water Revenue Increases | 11 |
| Figure 2-3. Water Fund Balance With and Without Rate Increases | 12 |
| Figure 2-4. Allocation of FY 2013-14 Revenue to Water Functions..... | 13 |
| Figure 2-5. Equivalent Meter Units | 14 |
| Figure 2-6. FY 2013-14 Cost of Service Comparison – Water | 15 |
| Figure 2-7. Monthly Service Charges (FY 2013-14) | 15 |
| Figure 2-8. Monthly Service Charges (FY 2013-14 to FY 2017-18)..... | 16 |
| Figure 2-9. Current Quantity Charges | 17 |
| Figure 2-10. Water Bill Distribution Curve | 18 |
| Figure 2-11. Cumulative Bill Distribution Curve | 18 |
| Figure 2-12. Single Family Residential Quantity Charge Structure..... | 20 |
| Figure 2-13. FY 2013-14 Monthly Quantity Charges | 21 |
| Figure 2-14. SFR Monthly Bill Comparison with Rate Increase..... | 21 |
| Figure 2-15. Single Family Quantity Charges (FY 2013-14 to FY 2017-18)..... | 22 |
| Figure 2-16. Multi Family Quantity Charges (FY 2013-14 to FY 2017-18) | 23 |
| Figure 2-17. Non-Residential Quantity Charges (FY 2013-14 to FY 2017-18)..... | 24 |
| Figure 2-18. Residential Bill Comparison | 25 |
| Figure 2-19. Non-Residential Bill Comparison | 25 |
| Figure 3-1. Wastewater Operations Annual Revenue Requirement | 28 |
| Figure 3-2. Wastewater Revenue Increases | 29 |
| Figure 3-3. Wastewater Fund Balance With and Without Rate Increases..... | 30 |
| Figure 3-4. Wastewater Allocation of FY 2013-14 Costs to Functions | 32 |
| Figure 3-5. Wastewater Customer Class Loadings..... | 33 |
| Figure 3-6. Wastewater Revenue Requirement Allocations to Customer Classes | 33 |
| Figure 3-7. Wastewater FY 2013-14 Cost of Service Comparison..... | 34 |
| Figure 3-8. Wastewater Proposed Monthly Charges | 35 |
| Figure 3-9. Wastewater Monthly Customer Bill Comparison (FY 2013-14) | 35 |
| Figure 4-1. Solid Waste Annual Revenue Requirement | 38 |
| Figure 4-2. Solid Waste Revenue Increases..... | 39 |
| Figure 4-3. Solid Waste Fund Balance With and Without Rate Increases..... | 41 |
| Figure 4-4. Solid Waste Cost of Service Analysis | 42 |

| | |
|--|----|
| Figure 4-5. Solid Waste Monthly Rates - Current and Projected..... | 43 |
| Figure 4-6. Solid Waste Residential Rate Comparison..... | 44 |
| Figure 4-7. Solid Waste Commercial Rate Comparison (3 CY – 1x/wk)..... | 45 |

ACRONYMS

| | |
|------------|---|
| BOD | Biochemical Oxygen Demand; an organic component of wastewater strength |
| CIP | Capital Improvement Plan |
| COS | Cost of service |
| DU | Dwelling unit |
| EDU | Equivalent Dwelling Unit; an average single-family residential customer |
| EMU | Equivalent meter unit |
| EPA | Environmental Protection Agency |
| FY | Fiscal Year |
| GCD | Gallons per Capita per Day |
| GPD | Gallons Per Day |
| HCF or CCF | Hundred (100) Cubic Feet of metered water; 748 gallons; a cube of water 4.6 feet on edge |
| I&I | Inflow and Infiltration; stormwater runoff that enters collection systems as inflow through surface openings or as infiltration through subsurface cracks or other openings |
| Mg/l | Milligrams per Liter |
| MRF | Material Recovery Facility |
| O&M | Operations and Maintenance |
| PAYGo | Pay-As-You-Go financing, as opposed to debt financing |
| PCWA | Placer County Water Agency |
| TGAL | Thousand Gallons |
| TSS | Total Suspended Solids; an inorganic component of wastewater strength |
| WPWMA | Western Placer Waste Management Authority |

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City Council

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Paul Joiner (Councilmember)
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1. EXECUTIVE SUMMARY

The City of Lincoln (City) provides water, wastewater, and solid waste services to residents and businesses primarily located inside the city limits. The last rate studies were completed in 2006 for water and wastewater and in 2005 for solid waste. The purpose of this report is to document the rate study HF&H Consultants (HF&H) conducted in 2012 and 2013.

The process of updating the City's water, wastewater, and solid waste rates began in February 2012 with meetings with Staff to discuss rate-making objectives, recent developments that should be reflected in the analysis, data collection, and model development. Preliminary results were presented to City Staff for review and revision in late 2012. Presentations were made to the City's Finance Committee on March 15, April 19, May 6, and June 4, 2013, based on comments and direction received from the Finance Committee members. Final revisions were made and presented to the City Council at a workshop on August 5, 2013.

1.1 STUDY PURPOSE AND OBJECTIVES

The purpose of this study is to conduct a comprehensive analysis of the City's utility rates, including documentation of the analysis, underlying assumptions, and the rationale for the recommended rates. This study has several key objectives:

- Determine how much revenue is required to meet the City's requirements, including O&M, capital improvement, and reserve funds.
- Determine the cost of service for each customer class.
- Evaluate alternative rate structures that will ensure that customers within each class are paying their proportionate shares of the revenue requirements.
- Compare the City's rates and customer bills with those of its neighboring agencies.

These objectives should be met by applying industry standards so that all applicable laws are complied with.

1.2 METHODOLOGY

This rate study included three analytic stages for each utility:

- **Revenue Requirement Projections.** The City's expenses and revenues are projected based on expected cost escalation factors and growth rates. The

difference between expenses and revenues must be offset by annual revenue increases.

- **Cost of Service Analysis.** The revenue requirement for the coming rate year is allocated to each customer class based on the cost of service attributable to each class.
- **Rate Design and Bill Comparison.** Rates are designed for each customer class to recover its share of the cost of service. The reasonableness of the rate design is evaluated by comparing bills between customer classes to ensure that proportionality is maintained.

1.3 RATE-MAKING OBJECTIVES

The City has several rate-making objectives that the recommended rates are designed to achieve:

- **Revenue Sufficiency.** Rates need to generate sufficient revenue to fund operating and capital costs and maintain adequate reserves.
- **Revenue Stability.** Rates are designed to balance revenue from fixed and variable charges to stabilize revenue.
- **Conservation Signal.** Rates are designed to reward customers for efficiency and to discourage waste.
- **Administrative Ease.** Rates are designed to enable easy implementation and ongoing administration, including monitoring and updating.
- **Affordability.** Rates need to be as affordable as possible while maintaining the City's sound financial position and credit rating.
- **Customer Acceptance.** Rates are designed to be as simple as possible to facilitate customer understanding and acceptance.
- **Fairness.** Rates are designed so that each customer class pays its proportionate share of the required revenue in compliance with legal rate-making requirements.

1.4 FINDINGS AND RECOMMENDATIONS

Revenue Requirement Projections

Figure 1-1 summarizes the annual increases in revenue requirements that rates must be set to fund for each enterprise. The comparatively high increase in water revenue

requirements is driven by the need to increase the amount of capital improvement that are needed in water infrastructure and by projected increases in the cost of purchased water from PCWA. The comparatively low increases in sewer and solid waste revenue requirements are driven primarily by inflation.

Figure 1-1. Revenue Requirement Projections

| | FY 2012-13 | Proposed | | | | |
|--------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | | FY 2013-14 | FY 2014-15 | FY 2015-16 | FY 2016-17 | FY 2017-18 |
| Water | \$ 11,367,370 | \$ 11,592,358 | \$ 12,538,528 | \$ 13,365,432 | \$ 14,217,343 | \$ 15,426,152 |
| Wastewater | \$ 6,734,876 | \$ 7,155,121 | \$ 6,857,972 | \$ 7,119,843 | \$ 7,305,044 | \$ 7,625,366 |
| Solid Waste | \$ 5,038,128 | \$ 5,089,450 | \$ 5,262,675 | \$ 5,449,451 | \$ 5,647,516 | \$ 5,861,792 |

Figures 1-2, 1-3, and 1-3 show the relative distribution of the major components of the revenue requirements for each enterprise in FY 2013-14. These figures generally indicate how rate payer revenue is spent.

Figure 1-2. FY 2013-14 Water Revenue Requirements

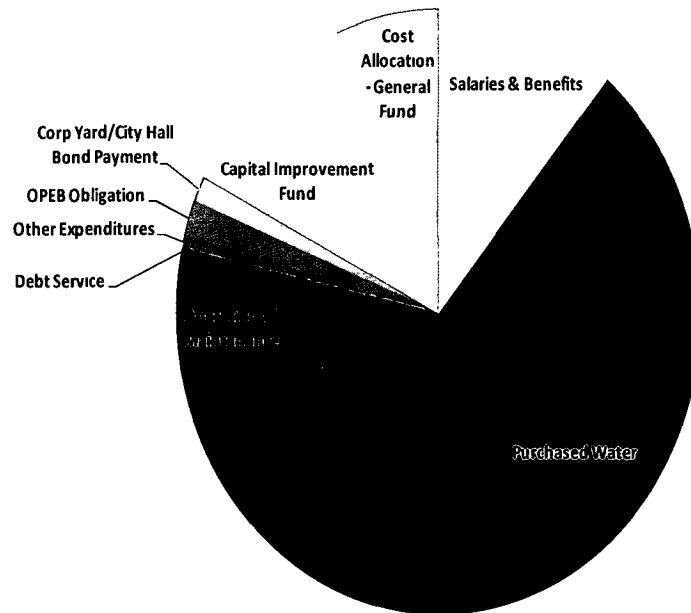
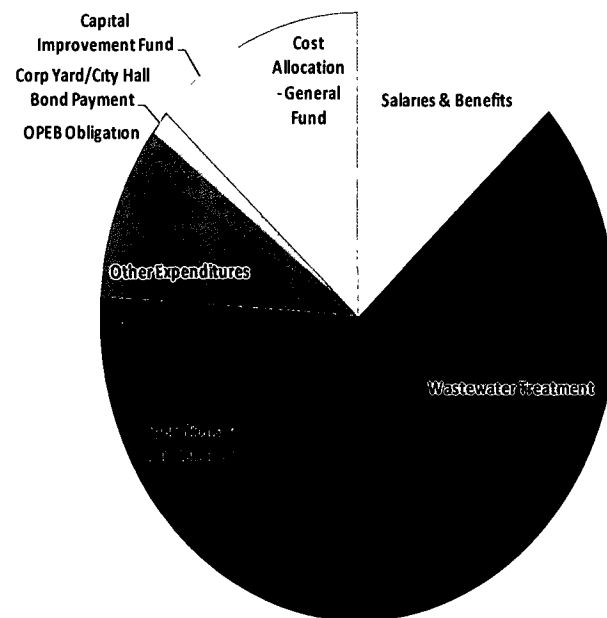
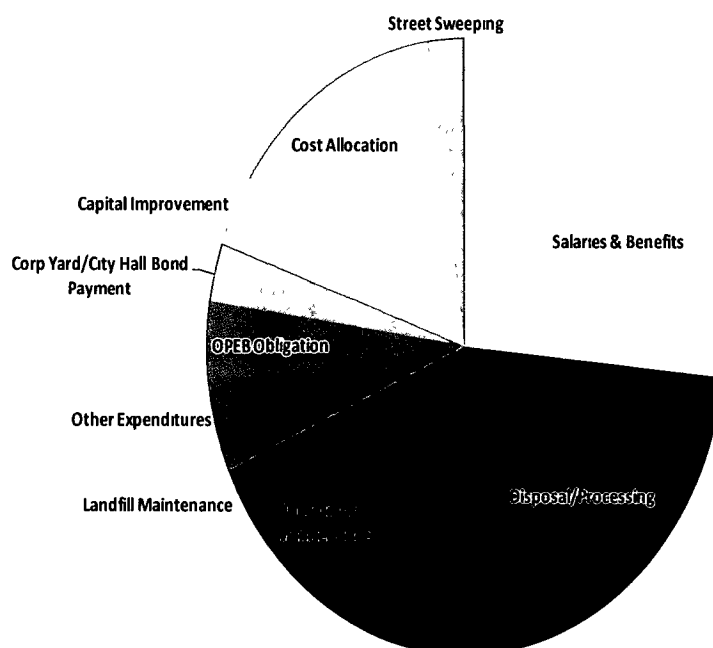


Figure 1-3. FY 2013-14 Sewer Revenue Requirements**Figure 1-4. FY 2013-14 Solid Waste Revenue Requirements**

Cost of Service Analysis

The cost of service analysis for water indicated that the current rates generate less than the cost of serving single family residential customers. Water rates were set to align the resulting revenue from each class with the cost of service for each class beginning in FY 2013-14.

The cost of service analysis for sewer indicated that the current rates generate less than the cost of serving non-residential customers. Sewer rates were set to align the resulting revenue from each class with the cost of service for each class by FY 2017-18.

The cost of service analysis for solid waste indicated that the current rates are closely aligned with the cost of serving each class; no adjustments in the rate structure are recommended.

Rate Design

The water rate structure was modified as follows:

- Convert the current base charge, which is a flat rate per account for all customers, to a service charge, which varies in proportion to the size of the customer's meter. By doing so, customers will pay for their proportionate shares of the capacity that they require in the water system. This recommendation complies with industry standards.
- Convert the service charges over a five-year period. This will reduce the immediate impact on the customers with larger services.
- Create different quantity charges for single family, multi family, and non-residential customers with tiers sized specifically for the levels of demand for each class. By doing so, each rate structure can be designed to provide a price signal that is appropriate to each class.
- Charge for all water including the water in Tier 1, which currently amounts to over 50% of total water use in the City. By doing so, customers will only pay for water they use. This recommendation complies with industry standards.

The sewer rate structure was modified as follows:

- Convert the non-residential customers from charges per EDU to charges based on a flat charge per account (equal to the residential charge) plus a volumetric component based on the estimated volume and strength of wastewater discharged.

- A five-year transition toward the cost of service is recommended because of the need to gradually implement the new non-residential rate structure, which is based on flow, rather than on EDUs.

There were no rate structure modifications in solid waste rates.

The result of the foregoing revenue increases, cost of service adjustments, and rate restructuring can be found in the body of this report.

Customer Bills

Figure 1-5 summarizes the average monthly customer bills for single family water, sewer, and solid waste customers. **Figure 1-6** plots the combined bills for each service through FY 2017-18. After the increases in FY 2013-14, the subsequent increases are comparatively gradual. The current \$74.96 average increases in FY 2013-14 to \$87.45 per month, an increase of \$12.49 per month. In subsequent years, the average increase is \$6.67 per month.

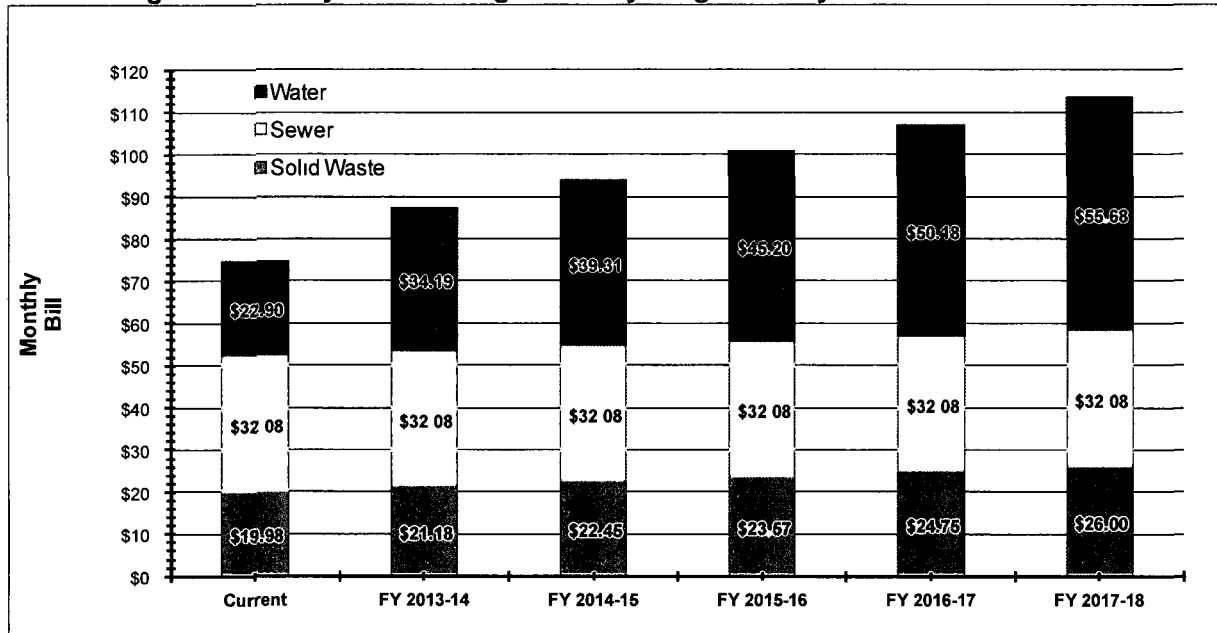
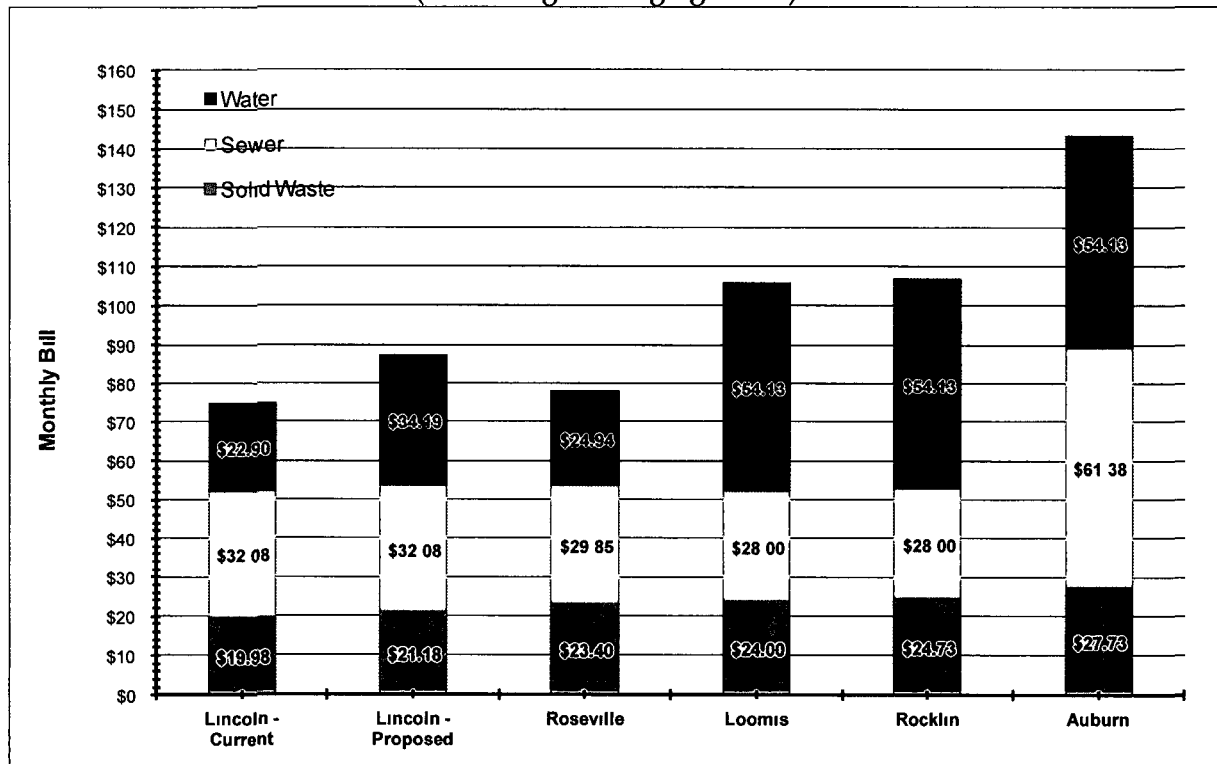
Figure 1-7 compares the City of Lincoln's current and proposed average single-family residential bills for FY 2013-14 with its neighboring agencies. The City's residential bills are low compared to its neighbors.

Each year, prior to implementing the rate increases, City staff should confirm the need for the rate increase. The City can implement a lower rate increase, if conditions warrant, without going through the Proposition 218 notification process. If higher rate increases are needed that exceed the adopted rates, the City will need to initiate a new Proposition 218 proceeding, which includes mailing notices to affected rate payers and property owners.

Figure 1-5. Summary of Projected Monthly Bills – Single Family Customers

| | Current | Proposed | | | | |
|-----------------------------|----------|------------|------------|------------|------------|------------|
| | | FY 2013-14 | FY 2014-15 | FY 2015-16 | FY 2016-17 | FY 2017-18 |
| Water | | | | | | |
| Average Monthly Water Bill* | \$ 22 90 | \$ 34 19 | \$ 39 31 | \$ 45 20 | \$ 50 18 | \$ 55 68 |
| Incremental Increase | | \$ 11 29 | \$ 5 12 | \$ 5 89 | \$ 4 98 | \$ 5 50 |
| Wastewater | | | | | | |
| Monthly Wastewater Bill | \$ 32 08 | \$ 32 08 | \$ 32 08 | \$ 32 08 | \$ 32 08 | \$ 32 08 |
| Incremental Increase | | \$ - | \$ - | \$ - | \$ - | \$ - |
| Solid Waste | | | | | | |
| Monthly Solid Waste Bill | \$ 19 98 | \$ 21 18 | \$ 22 45 | \$ 23 57 | \$ 24 75 | \$ 26 00 |
| Incremental Increase | | \$ 1 20 | \$ 1 27 | \$ 1 12 | \$ 1 18 | \$ 1 25 |
| Combined | | | | | | |
| Average Monthly Bill | \$ 74 96 | \$ 87 45 | \$ 93 84 | \$ 100 85 | \$ 107 01 | \$ 113 76 |
| Incremental Increase | | \$ 12 49 | \$ 6 39 | \$ 7 01 | \$ 6 16 | \$ 6 75 |

* Reflects monthly bill for 8,000 gallons which was the median single-family usage from May 2011 - April 2012

Figure 1-6. Projected Average Monthly Single-Family Bills – All Services**Figure 1-7. Comparison of Average Monthly Single-Family Bills
(With neighboring agencies)**

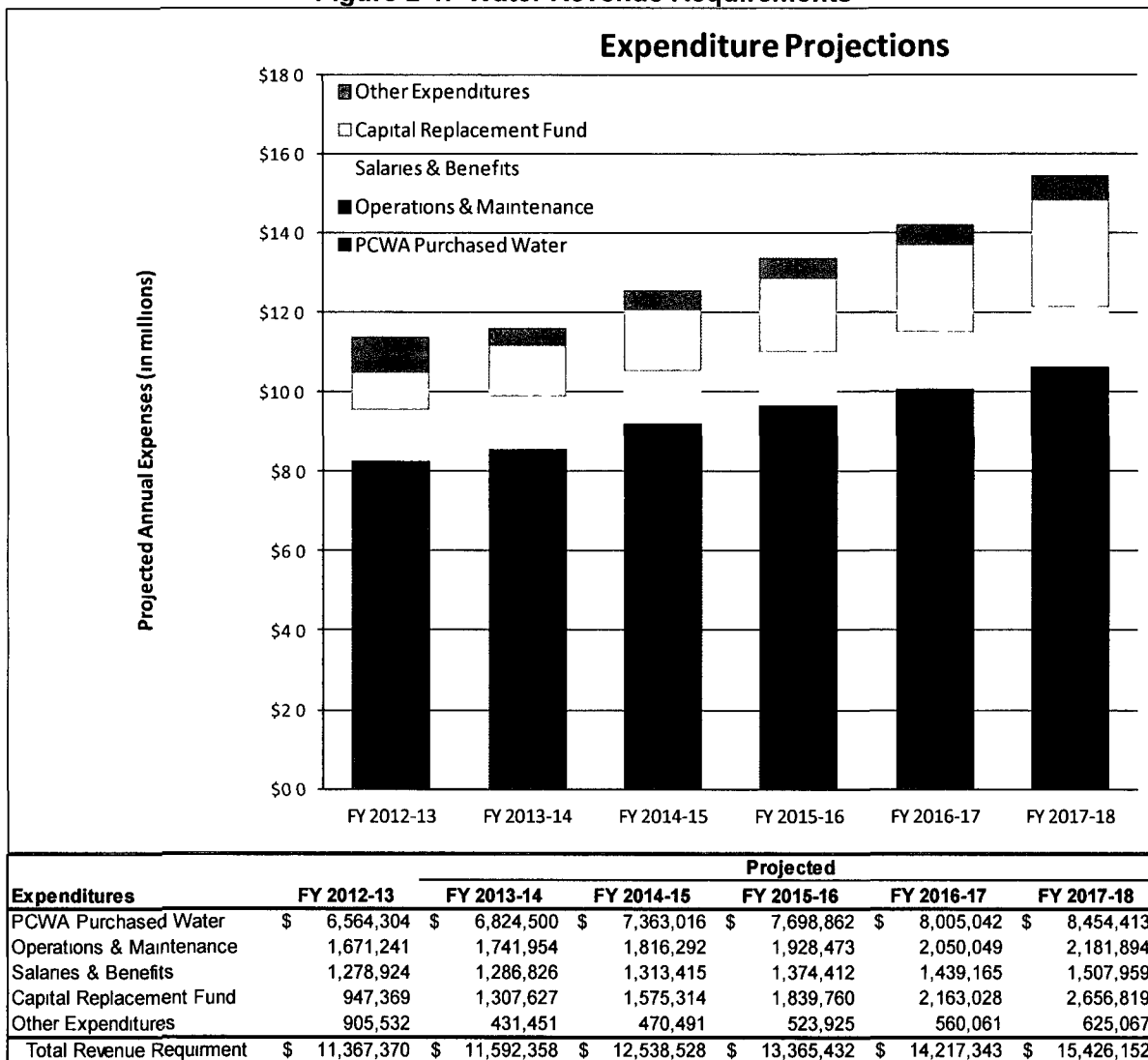
2. WATER RATES

2.1 BACKGROUND

The City provides water service to more than 16,000 accounts through a system of wells, reservoirs, booster pumps, and distribution pipelines; all of the customers are metered. The City currently charges customers monthly bills that are the sum of a base charge plus a volumetric charge. The current base charge is \$22.90 per month per Equivalent Dwelling Unit (EDU), and includes up to 10,000 gallons of water per month at no additional charge. The volumetric charges per 1,000 gallons applies to water use over 10,000 gallons per month. Because the median residential demand is about 8,000 per month, much of the water used is included in the minimum charge.

2.2 REVENUE REQUIREMENT PROJECTIONS

Rate analysis begins by determining the revenue requirements that must be met by rates. For purposes of this study, a five-year rate projection period was developed using a spreadsheet model. With this model, revenue requirements were projected for FY 2013-14 through FY 2017-18 by using the FY 2012-13 budget as the starting point. Figure 2-1 summarizes the major categories comprising the revenue requirements.

Figure 2-1. Water Revenue Requirements

Key Assumptions

PCWA Purchased Water Expense

The largest operating expense is the cost to purchase water from PCWA. The City's budget for FY 2012-13 served as the starting point for projecting PCWA purchased water expenses. FY 2013-14 and FY 2014-15 values reflect the latest PCWA rate projections and inflationary increase of 3.0% per year, thereafter. The cost of PCWA water is set by PCWA and is passed through to customers at cost.

Salaries and Benefits Expense

The City's budget for existing personnel as of FY 2012-13 served as the starting point for projecting operating and administrative wage and benefit expenses. It should be noted that the City's FY 2012-13 budget includes the proposed addition of two new water

technicians and an allocation of 35% and 45% of an Environmental Services Manager and a Senior Engineer, respectively. For FY 2013-14 through FY 2017-18, the salaries and benefits for the existing and proposed staff were assumed to increase due to increases in health care premiums, workers' compensation insurance rates, and wage rates.

Operations and Maintenance Expense

The City's operations and maintenance (O&M) expenses (excluding salaries, benefits, and purchased water costs) budget for FY 2012-13 served as the starting point for projecting operations and maintenance expenses. Generally, these expenses were increased by 3.0% per year to approximate assumed inflationary increases.

Transfers to the General Fund are included in O&M. These transfers reimburse the General Fund for services provided to the water enterprise. The City conducts annual analyses to allocate governmental overhead to each of the enterprises to ensure that each enterprise provides full reimbursement for services received.

Capital Replacement Fund

The majority of the capital replacement fund expense comprises pay-as-you-go (PAYGo) funding for capital improvement projects. The City plans to fund future capital improvements of existing infrastructure on a PAYGo basis using a portion of annual rate revenue and available reserves. Capital improvements are projected to increase over the five-year period from \$1.0 million to \$2.7 million.

PAYGo funding is less expensive because it avoids financing costs. It is also appropriate for the type of capital improvements, which are on-going renewals and replacements that are needed to keep pace with depreciation. Larger, periodic capital projects such as major new facilities are more appropriate candidates for debt financing. Existing debt service is minimal and will be retired in FY 2016-17; there are no plans to issue additional debt for water capital projects.

Other Expenditures

The other expenditures are comprised of the Water enterprise's share of the corp yard bond payment, debt service, annual OPEB obligation, and a one-time transfer of \$500,000 in FY 2012-13 for infrastructure improvements.

Projected Revenue Increases

The amount by which revenue needs to be increased to cover the revenue requirements is determined by comparing the revenue requirements with the revenue from current rates. Annual surpluses or deficits are credited or debited to reserves. It can be seen that a deficit occurred in FY 2012-13 and that future deficits are projected unless rates are increased (or the projected cost increases are eliminated, which would mean

significantly reducing the planned capital improvements). **Figure 2-2** shows the annual revenue increases that are required.

Figure 2-2. Water Revenue Increases

| Expenditures | FY 2012-13 | FY 2013-14 | FY 2014-15 | Projected | | |
|--------------------------------|---------------|---------------|---------------|---------------|----------------|----------------|
| | | | | FY 2015-16 | FY 2016-17 | FY 2017-18 |
| Revenue Requirement | \$ 11,367,370 | \$11,592,358 | \$12,538,528 | \$13,365,432 | \$14,217,343 | \$15,426,152 |
| Revenue from Current Rates | \$8,870,348 | \$8,916,971 | \$8,963,595 | \$9,010,218 | \$9,056,842 | \$9,103,465 |
| Surplus/(Deficit) | (\$2,497,022) | (\$2,675,386) | (\$3,574,933) | (\$4,355,214) | (\$5,160,501) | (\$6,322,687) |
| Fund Balance (before increase) | \$3,712,659 | \$1,271,671 | (\$2,121,339) | (\$6,584,763) | (\$12,085,943) | (\$18,816,301) |
| Revenue Increase | 0 0% | 15 0% | 15 0% | 15 0% | 11 0% | 11 0% |
| Revenue from Increases | \$0 | \$668,773 | \$2,761,908 | \$4,556,762 | \$6,242,721 | \$7,823,643 |
| Fund Balance (after increase) | \$3,712,659 | \$1,942,115 | \$1,311,875 | \$1,406,580 | \$2,152,197 | \$3,253,321 |

Revenue is increased not only to cover projected expenditures but also to maintain operating and capital reserves at adequate levels. It is the City's practice to maintain two reserve funds for water operations: an operating reserve and a capital replacement reserve. For purposes of rate setting, the following reserve target balances were established

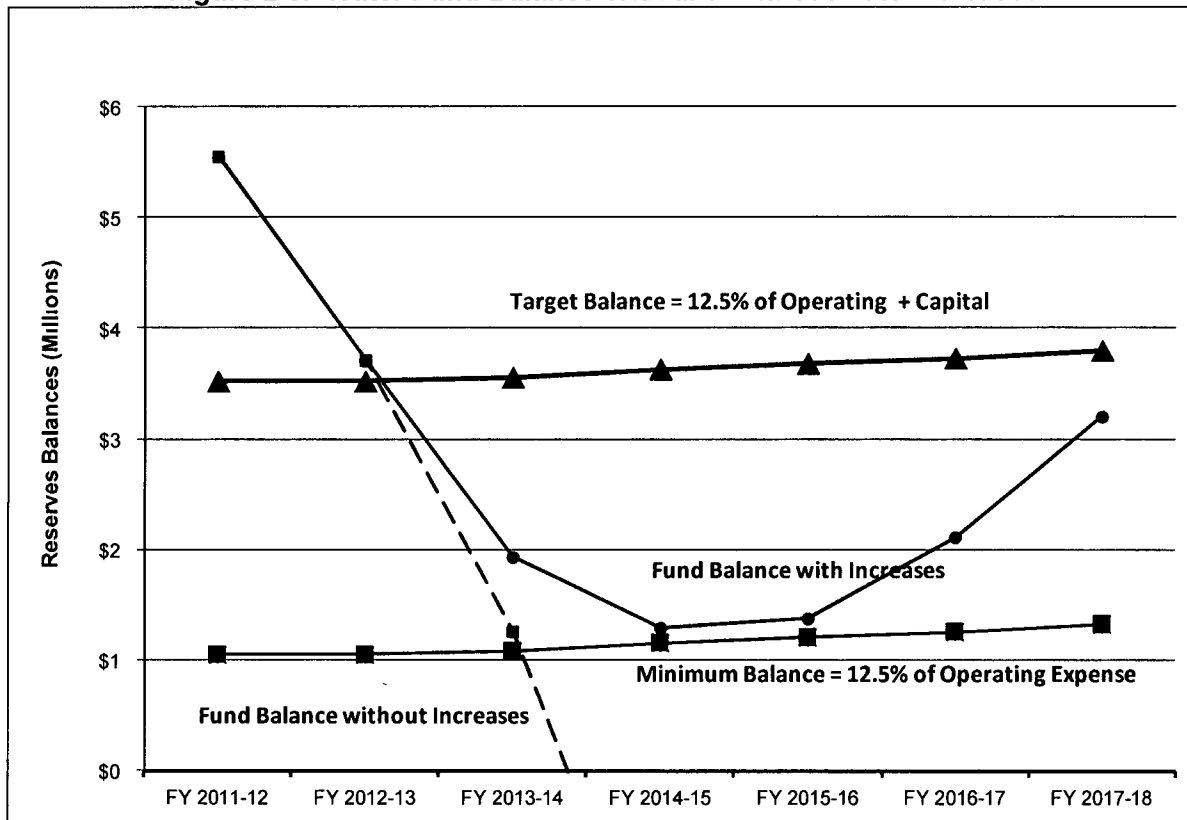
- **Minimum Balance.** The Minimum Balance is based on the amount of revenue that is needed to provide month-to-month cash flow for O&M expenses. By maintaining this minimum reserve, the enterprise is able to meet its cash flow without borrowing from the General Fund. The fund balance should never drop below the Minimum Balance, which is currently about \$1.0 million. The Minimum Balance is based on the bill frequency. For utilities that bill monthly, a minimum of approximately six weeks of O&M expenses is recommended.
- **Target Balance.** The Target Balance is the Minimum Balance plus an additional cash margin for capital improvements so that sufficient funds are available to pay for ongoing PAYGo projects without cash flow constraints. The capital component is set to two times the average annual PAYGo expenditures, which is about \$2.5 million.

The Target Balance does not provide additional reserves for emergencies, complying with regulatory uncertainty, and other unforeseeable contingencies. For that reason, the Target Balance should be regarded as a minimal reserve. It is desirable to maintain reserves above the Target Balance to provide a prudent margin to stabilize rates.

The preceding modeling assumptions lead to the projected fund balances shown in **Figure 2-3**. The need for the series of revenue increases in **Figure 2-2** is demonstrated by the resulting fund balances. Larger revenue increases are required initially to avert

the declining fund balance. Subsequent revenue increases are required as capital improvements are ramped up to the required level.

Figure 2-3. Water Fund Balance With and Without Rate Increases



2.3 COST OF SERVICE ANALYSIS

Cost of service analysis determines each customer class' proportionate share of the revenue requirement. Rates are then designed to ensure that each class is paying its proportionate share of the revenue requirements. The cost of service is determined in three steps.

- Revenue requirements are categorized into functions or services.
- The unit cost of service is calculated by dividing the cost for each service by its respective units of service.
- The revenue requirements are allocated to each class by multiplying the unit costs times the units of service used by each class.

Allocation of Costs to Functions

Water supply systems provide capacity to meet demands. For purposes of this rate study, the revenue requirements are accordingly apportioned into two categories

corresponding to capacity and demand functions. The capacity function is defined as those operating and capital costs that are primarily fixed in nature. Fixed costs are commensurate with capacity, which is also static, as opposed to demand costs, which vary with demand. Capacity costs are recovered through a fixed charge that is proportionate to the customer's proportionate share of capacity in the system as measured by the size of the service connection. Much of the water system's costs are fixed and do not vary in proportion to flow, such as capital and personnel costs. In FY 2012-13, approximately 43% of the revenue requirement is fixed; by FY 2017-18, the fixed component is projected to increase to 45% as additional capital funding occurs.

The City's existing base rate, which is a fixed charge, generates 52% of total rate revenue. At 52%, the base charges recover close to the amount of fixed costs. During meetings with the Finance Committee, it was concluded that the rates should continue to generate a similar portion of fixed revenue to provide revenue stability at a time when significant rate restructuring is occurring.

Figure 2-4 shows the allocation of revenue between capacity and demand charges, which serves as the basis for the cost-of-service allocations. The \$10,287,747 revenue is based on the FY 2012-13 revenue in **Figure 2-2** increased by 15% (ignoring bad debt and sales outside the City, which together are minimal).

Figure 2-4. Allocation of FY 2013-14 Revenue to Water Functions

| | Capacity Costs | Demand Costs | Total |
|-----------------|----------------|--------------|--------------|
| Current | \$5,300,287 | \$4,987,459 | \$10,287,747 |
| | 52% | 48% | 100% |
| Cost of Service | \$5,143,873 | \$5,143,873 | \$10,287,747 |
| | 50% | 50% | 100% |

The capacity costs serve as the basis for allocating costs in proportion to water meter size. These allocations are independent of customer class. The demand costs serve as the basis for allocating costs to each customer class in proportion to demand.

Unit Costs of Service

There are units of service for the capacity and demand functions. For capacity related costs, equivalent meter units (EMUs) are used. For demand costs, the units of service are thousand gallons (TGALs).

Capacity Units of Service

EMUs are determined based on the capacity that larger meters provide compared to the smallest meters, which for purposes of this study are considered to be 5/8" and 3/4" meters. **Figure 2-5** shows the multipliers that were used to establish the number of EMUs. When the EMU multipliers are multiplied by the number of meters of each size,

the total number of EMUs is derived. The unit cost of capacity is derived by dividing the capacity costs by the number of EMUs.

Figure 2-5. Equivalent Meter Units

| EMU Multipliers | | Meters | EMUs |
|-----------------|-------|-------------------|-------------|
| 5/8" | 1 00 | 15 | 15 |
| 3/4" | 1 00 | 16,325 | 16,325 |
| 1" | 1 50 | 220 | 330 |
| 1 1/2" | 5 00 | 95 | 475 |
| 2" | 8 00 | 61 | 488 |
| 3" | 16 00 | 22 | 352 |
| 4" | 25 00 | 6 | 150 |
| 6" | 40 00 | 1 | 40 |
| 8" | 71 11 | 2 | 142 |
| | | Total EMUs | 18,317 |
| | | Capacity costs | \$5,143,873 |
| | | Annual unit cost | \$280 82 |
| | | Monthly unit cost | \$23 40 |

Demand Units of Service

The demand units of service are derived by dividing the demand costs by the projected demand (\$5,143,873 divided by 2,600,150 TGAL), which yields \$1.978 per TGAL. We note that the projected single family demand is reduced by 5% in anticipation of conservation by customers. Factoring conservation is prudent and will reduce the revenue shortfall that would occur when sales revenue drops because of conservation. Even with conservation, most costs remain and need to be recovered.

Revenue Requirement Allocations to Customer Classes

The allocation of revenue requirements to the capacity function is independent of customer class and hence no further allocation step is needed. The resulting unit costs are used in the next section for calculating service charges.

The allocation of revenue requirements to the demand function is dependent on customer classes and is discussed in this section. The allocation is shown in **Figure 2-6**. The \$1.978/TGAL unit cost is applied to the projected units of demand for each class to determine each class' share of the demand function. By applying the same unit cost to all customer classes, a common measure of proportionality is maintained and no class is disproportionately impacted. The resulting allocations were used in the next section to derive the quantity charges for each class.

Figure 2-6. FY 2013-14 Cost of Service Comparison – Water

| | Projected Demand (tgal) | Unit Cost of Service | Cost of Service Allocation | Existing Allocation | COS Minus Existing |
|---------------|----------------------------|-------------------------|-------------------------------|------------------------|-----------------------|
| Single-Family | 2,133,807 | \$1 978 | \$4,221,307 | \$3,179,024 | \$1,042,283 |
| Multi-Family | 92,120 | \$1 978 | \$182,241 | \$346,938 | (\$164,697) |
| Commercial | 164,439 | \$1 978 | \$325,310 | \$595,073 | (\$269,763) |
| Industrial | 68,501 | \$1 978 | \$135,515 | \$297,367 | (\$161,851) |
| Irrigation | 141,283 | \$1 978 | \$279,500 | \$569,057 | (\$289,557) |
| Subtotal | 374,223 | | \$740,325 | \$1,461,497 | (\$721,172) |
| | 2,600,150 | | \$5,143,873 | \$4,987,459 | \$156,414 |

Figure 2-6 indicates that the revenue from existing rates differs from each class' share of the cost of service. Single family rates need to increase to bring them in line with the cost of serving this class.

2.4 RATE DESIGN

Service charges are designed to recover the capacity costs in Figure 2-5 and quantity charges are designed to recover the demand costs in Figure 2-6.

Service Charges

The service charge for each meter size is derived by multiplying the \$23 40 unit cost of service per EMU times the number of EMU multipliers for each meter. The resulting charges for FY 2013-14 are shown in Figure 2-7.

Figure 2-7. Monthly Service Charges (FY 2013-14)

| | EMU Multipliers | Unit Cost | Monthly Service Charge |
|--------|-----------------|--------------|------------------------------|
| 5/8" | 1 00 | \$23 40 | \$23 40 |
| 3/4" | 1 00 | \$23 40 | \$23 40 |
| 1" | 1 50 | \$23 40 | \$35 10 |
| 1 1/2" | 5 00 | \$23 40 | \$117 01 |
| 2" | 8 00 | \$23 40 | \$187 21 |
| 3" | 16 00 | \$23 40 | \$374 43 |
| 4" | 25 00 | \$23 40 | \$585 05 |
| 6" | 40 00 | \$23 40 | \$936 07 |
| 8" | 71 11 | \$23 40 | \$1,664 10 |

When the annual revenue increases are applied in subsequent years, the projected service charges are shown in Figure 2-8. The proposed charges for larger meters are significantly greater than the existing base charges (which also include the first 10,000 gallons of monthly demand). This differences demonstrates how little of the fixed costs

of capacity are recovered by the current base charges. The cost of capacity includes more than just the cost of the meter, which is a small component of the overall costs of capacity. The cost of capacity includes capacity in all of the transmission and distribution pipelines, wells, reservoirs, and booster pump stations. The current base charges fail to recover these costs in proportion to the capacity that is needed by customers with larger sized meters. By increasing the service charges in proportion to the capacity of the meter, the customers with larger sized meters pay their proportionate share of capacity.

Figure 2-8. Monthly Service Charges (FY 2013-14 to FY 2017-18)

| Meter Size | Current Charge | Proposed Monthly Service Charges | | | | |
|------------|----------------|----------------------------------|------------|------------|------------|------------|
| | | 1/1/2014 | 7/1/2014 | 7/1/2015 | 7/1/2016 | 7/1/2017 |
| 5/8" | \$22.90 | \$ 23.40 | \$ 26.91 | \$ 30.95 | \$ 34.35 | \$ 38.13 |
| 3/4" | \$22.90 | \$ 23.40 | \$ 26.91 | \$ 30.95 | \$ 34.35 | \$ 38.13 |
| 1" | \$22.90 | \$ 35.10 | \$ 40.37 | \$ 46.42 | \$ 51.53 | \$ 57.20 |
| 1 1/2" | \$22.90 | \$ 117.01 | \$ 134.56 | \$ 154.75 | \$ 171.77 | \$ 190.66 |
| 2" | \$22.90 | \$ 187.21 | \$ 215.30 | \$ 247.60 | \$ 274.83 | \$ 305.06 |
| 3" | \$22.90 | \$ 374.43 | \$ 430.59 | \$ 495.18 | \$ 549.65 | \$ 610.12 |
| 4" | \$22.90 | \$ 585.05 | \$ 672.80 | \$ 773.72 | \$ 858.83 | \$ 953.30 |
| 6" | \$22.90 | \$ 936.07 | \$1,076.48 | \$1,237.96 | \$1,374.13 | \$1,525.29 |
| 8" | \$22.90 | \$1,664.10 | \$1,913.72 | \$2,200.78 | \$2,442.87 | \$2,711.58 |

Quantity Charges

The derivation of the quantity charges was a collaborative process between City staff and HF&H. HF&H conducted the core analysis with City staff making adjustments to recover the additional costs of capacity charged by PCWA when customers exceed their purchased capacity.

Current Quantity Charges

The City's current quantity charges are shown in **Figure 2-9**. This is a tiered structure that applies to all customer class in which the rates increase as demand exceeds various levels. In Tier 1, customers receive the first 10,000 gallons at no charge (the cost is included the \$22.90 based charge). The price increments between the subsequent tiers are very slight compared to the actual costs of providing for higher demands.

Figure 2-9. Current Quantity Charges

| Current Monthly Charges - Per 1,000 Gallons | | |
|--|--------------------------|-------------|
| | <u>Gallons per Month</u> | <u>Rate</u> |
| Tier 1 | 0-10,000 gals | \$0.00 |
| Tier 2 | 10,001-20,000 gals | \$3.53 |
| Tier 3 | 20,001-60,000 gals | \$3.63 |
| Tier 4 | 60,001-350,000 gals | \$3.73 |
| Tier 5 | Over 350,000 gals | \$3.83 |

In meetings with the Finance Committee, the following changes were made to the current rate structure:

- Create different quantity charges for single family, multi family, and non-residential customers with tiers sized appropriately for the levels of demand for each class. By doing so, each rate structure can be designed to provide a price signal that is specific to each class.
- Charge for all water including the water in Tier 1, which currently amounts to over 50% of total water use in the City. By doing so, customers will only pay for water they use.
- Price water for each tier that is more closely aligned with the cost of service by charging less than the average unit cost for below-average use (because it is less expensive to serve low demand) and by charging above the average cost for above-average use, which burdens the system with the expense of providing for high peak demands.

The detailed derivations of the rate calculations performed by HF&H are provided in the appendix to this report; additional documentation for the City's refinements are available from the City. For purposes of illustrating the methodology, the calculations for single family customers are presented below.

Residential Quantity Charges

The analysis was performed using one recent year of residential customer billing data (i.e., all of the residential bills from the prior year). The billing data was sorted from smallest to largest and plotted in **Figure 2-10** and **Figure 2-11**. Note that the median¹ use is 8 tgal, which is less than the current 10 tgal Tier 1 breakpoint. This means that more than half of the bills do not exceed Tier 1 where there is no charge for water. In effect, the City is making limited use of its water meters, which, as an industry practice in California, are typically used for billing for all water use. In this way, customers

¹ The median is a statistical parameter indicating that half of the total values are less than the median and half is greater

receive a benefit from using as little water as possible at all times, which is an appropriate conservation signal in a semi-arid state.

Figure 2-10. Water Bill Distribution Curve

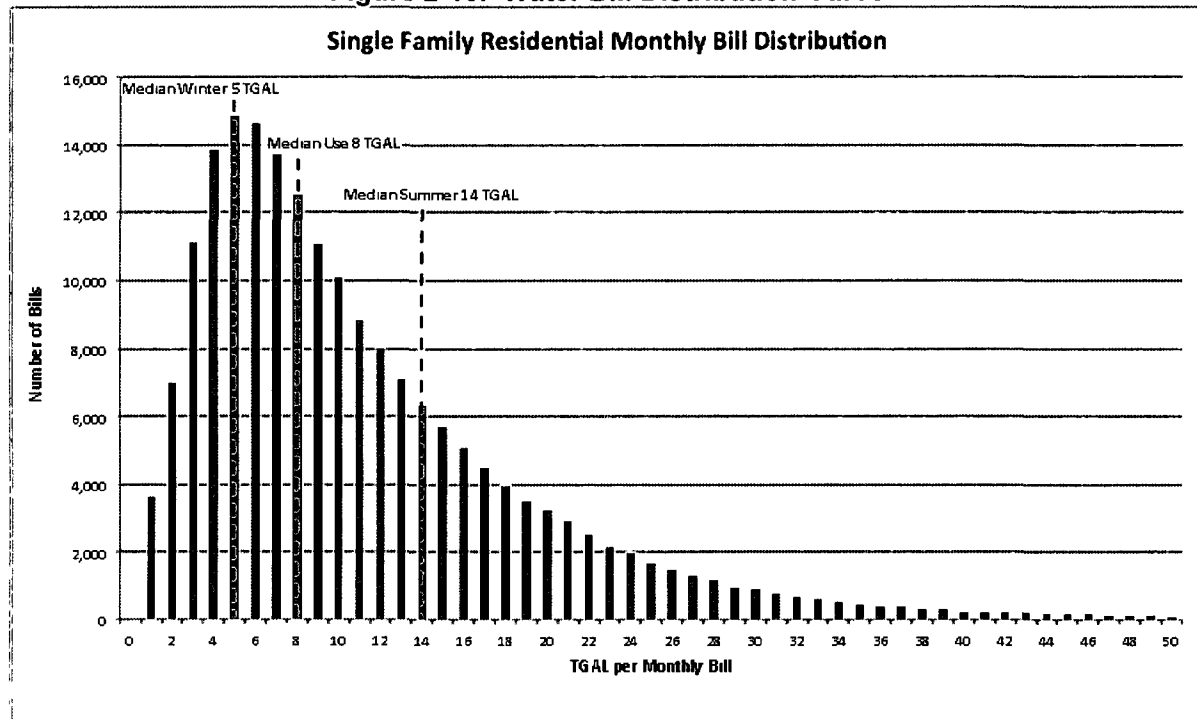


Figure 2-11. Cumulative Bill Distribution Curve

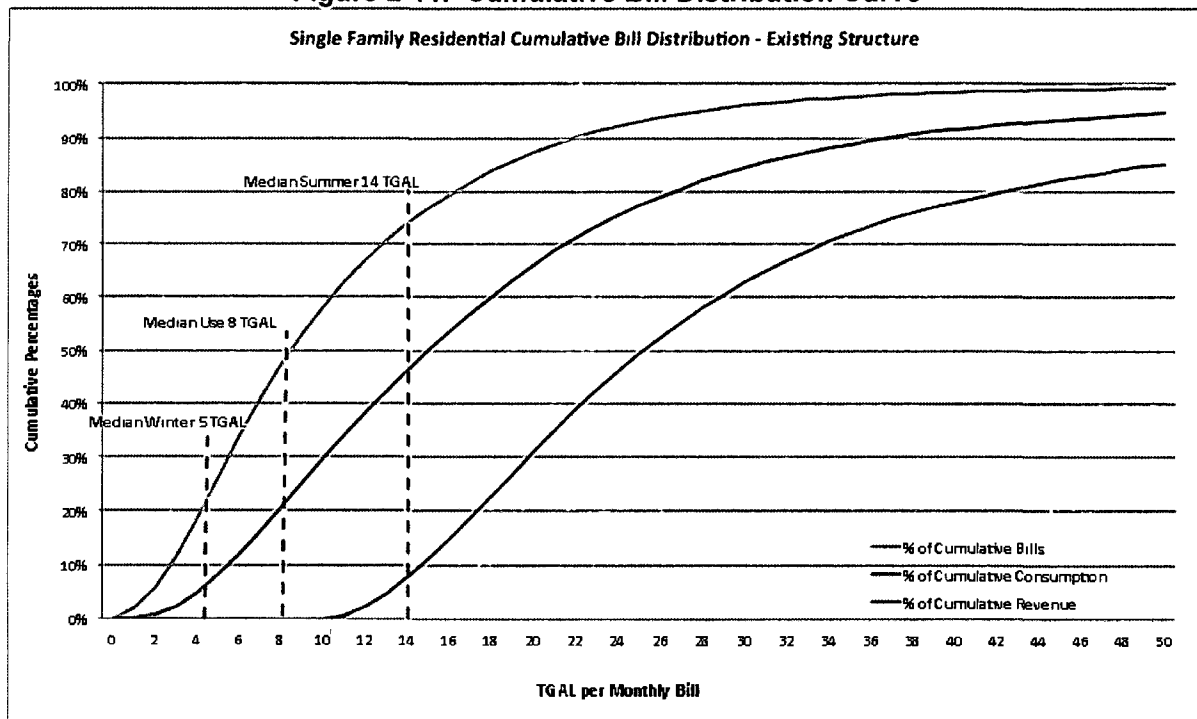


Figure 2-11 indicates that 60% of single family bills fall within the current 10 tgal allowance. As a result, only 40% of the bills include billed consumption, which amounts to 70% of the total single family consumption.

Figure 2-12 illustrates the tier structures for the existing and proposed rates and compares them with the average cost. The breakpoints and prices for the proposed rates were developed working with the City's Finance Committee to ensure that the rate structure achieved the City's rate-making objectives.

The rationale for determining the location of each breakpoint is as follows:

- **Tier 1/Tier 2 breakpoint.** 5 tgals is the winter median demand, which represents the most efficient demand with the least irrigation and attendant peaking on the system.
- **Tier 2/Tier 3 breakpoint.** 14 tgals is the summer median demand. Demand at this level falls within the design capacity of the system and imposes no excessive peak demand on the system.
- **Tier 3/Tier 4 breakpoint.** 21 tgals is 50% greater than summer median demand and includes 90% of the bills, leaving the last 10% of bills for the highest tiers.
- **Tier 4/Tier 5 breakpoint.** 35 tgals represents the demand for one EDU of capacity purchased from PCWA. Demand in excess of this amount imposes an additional charge for capacity from PCWA on the City, which is recovered in the highest tier.
- **Tier 5 breakpoint.** Above 35 tgals is a small set of customers with demand that exceeds their purchased capacity from PCWA.

The rationale for setting the rates for each tier is as follows:

- **Tier 1 rate.** Tier 1 use is the most efficient and the least expensive to serve. A cost equal to 55% of the average cost recognizes the lower cost of service as well as provides a reward for efficiency, which also serves to encourage continued conservation.
- **Tier 2 rate.** Tier 2 use includes indoor use as well as a moderate amount for outdoor use. Use at this level does not burden the system and is priced at close to the average cost.
- **Tier 3 rate.** Tier 3 use exceeds moderate use. If all customer use were at this level, the average cost would be greater than it currently is. For that reason, Tier 3 is priced at 150% of the average cost.
- **Tier 4 rate.** Tier 4 use comprises use that is as high as 35 tgals. This unusually high use is comparable to the indoor water use for 21 people based on 55 gallons per day (using State guidelines). Such high use is priced at 275% of the average cost.

- Tier 5 rate.** Tier 5 use includes the highest 4% of excessively high bills. Demand at this level burdens the system with providing for expensive peaking that is well above moderate needs. Because this demand exceeds the 35 tgal provided for in purchasing one EDU of capacity, the City incurs additional costs for additional capacity needed from PCWA. To cover this cost, \$2.61 is added to this rate based on the City's amortized cost of this capacity. Such excessive use is priced at 400% of the average cost to provide a strong deterrent to discourage waste.

Figure 2-12. Single Family Residential Quantity Charge Structure

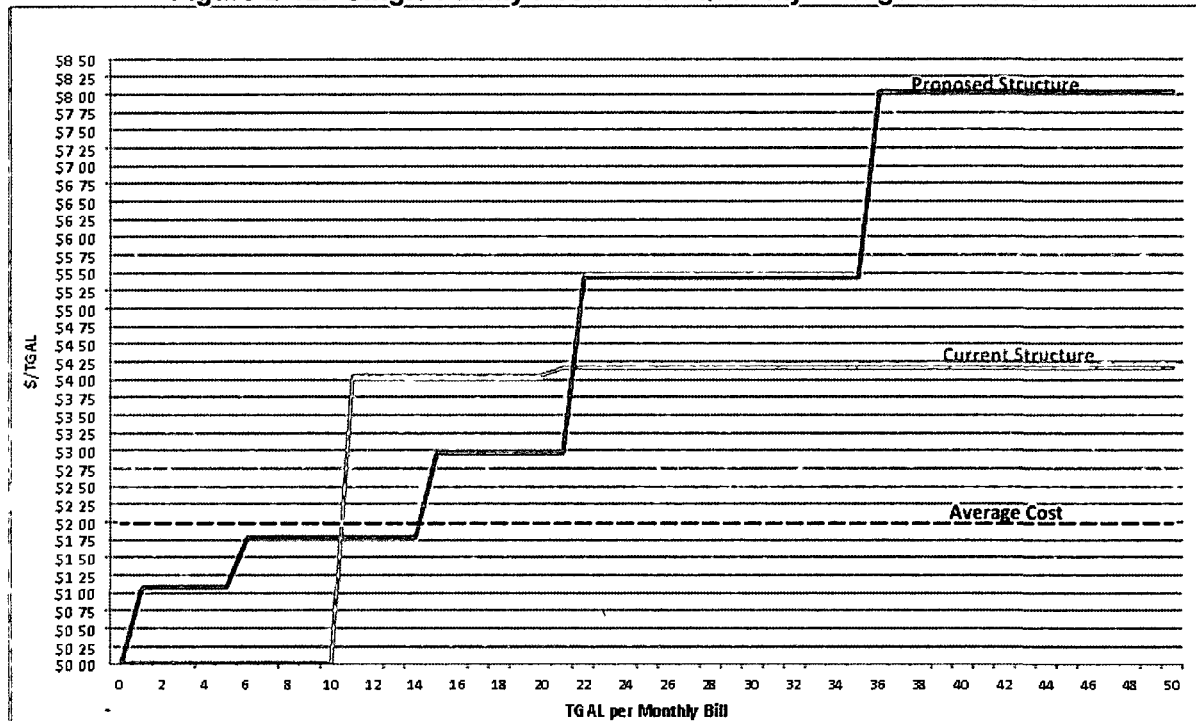


Figure 2-13 summarizes the results of the analysis, which shows the location of the proposed breakpoints and the distribution of water among tiers. The distribution shows that only a small amount of the water is billed at the highest rates. The rates per tier are shown, indicating how much the rate is in each tier compared to the average cost. The distribution of revenue is also shown. Note that the total revenue generated from these quantity charges includes \$216,000 for the cost of additional capacity from PCWA for use in excess of 35,000 gallons.

Figure 2-13. FY 2013-14 Monthly Quantity Charges

| | Tier 1 | Tier 2 | Tier 3 | Tier 4 | Tier 5 | Total |
|--------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Breakpoints (tgal/mo) | 5 | 14 | 21 | 35 | 35+ | |
| Water billed in tier (tgal) | 885,180 | 808,056 | 228,143 | 134,837 | 77,591 | 2,133,805 |
| Percent of total water | 41% | 38% | 11% | 6% | 4% | 100% |
| Rate per tier (\$/tgal) | \$1.088 | \$1.780 | \$2.967 | \$5.440 | \$8.050 | \$1.978 |
| Rate compared to avg cost | 55% | 90% | 150% | 275% | 400% | |
| Revenue produced per tier | \$ 963,132 | \$1,438,718 | \$ 677,001 | \$ 733,554 | \$ 624,608 | 4,437,013 |
| Percent of total revenue | 22% | 32% | 15% | 17% | 14% | 100% |

Figure 2-14 compares bills (the sum of a service charge for a 3/4" meter and the quantity charge) across a range of consumption. The bills based on a uniform rate are bills in which the quantity charge is the same amount for all consumption, as opposed to the tiered structures for the current and proposed bills.

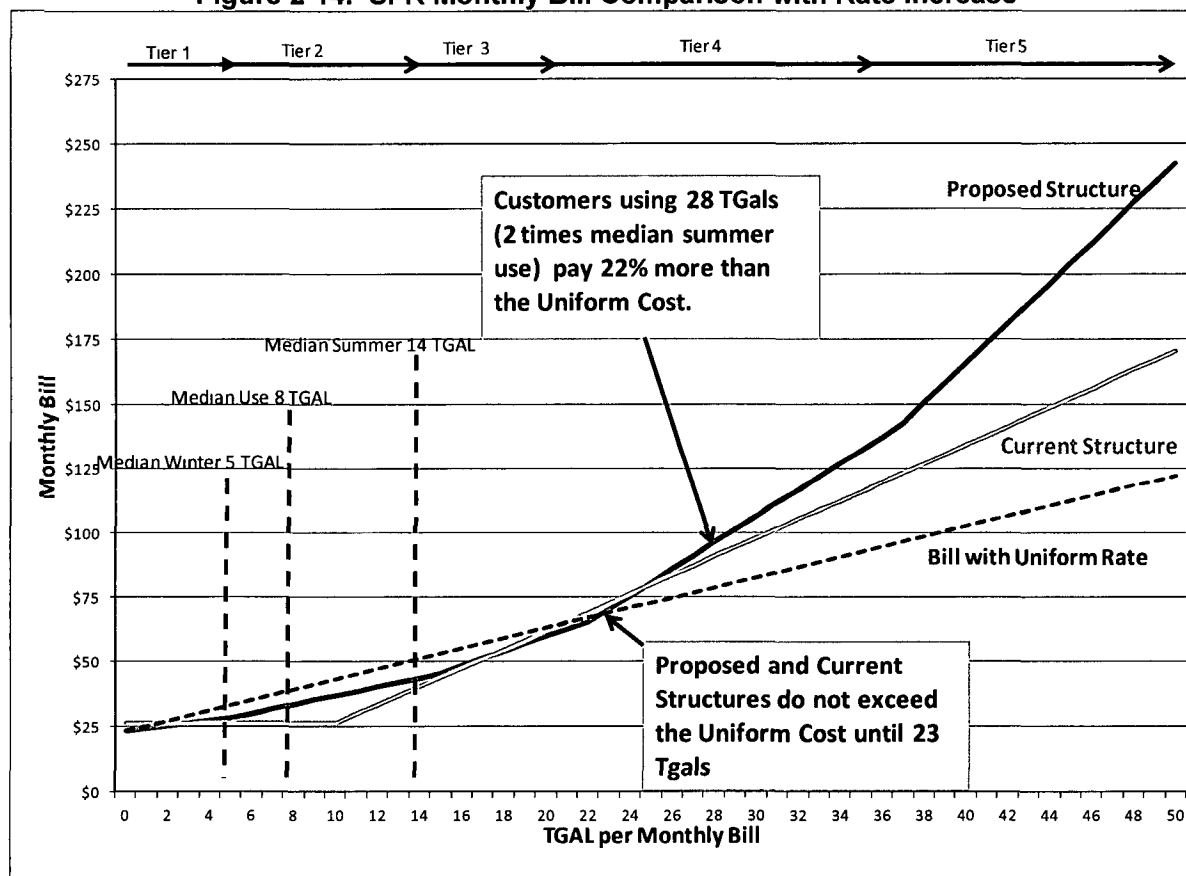
Figure 2-14. SFR Monthly Bill Comparison with Rate Increase

Figure 2-14 shows that customers pay less than the average cost until demand exceeds 23,000 gallons, which is well above median summer demand. For the proposed rates, this occurs because the rates for Tiers 1 and 2 are below the average cost. The cumulative benefit they initially receive is not offset until their demand moves well beyond Tier 2.

We note that the line representing bills under the current rate structure is based on the current rates simply increased 15%. As such, the current rates will generate the required revenue but will not generate all of the revenue from single family customers that is equal to their share of the cost of service, as is the case with the proposed rates.

Figure 2-15 shows the projected rates for the single family customers. It is noted that City staff increased the size of the breakpoint for Tier 4 for areas of the City in which the customers had paid for more PCWA capacity. In those areas, the larger breakpoints allow customers to purchase more water before they pay the higher rates in Tiers 4 and 5, which have been increased over the amounts shown in **Figure 2-13** to cover the additional cost of capacity that the City will be subject to because of excessive water demand.

Figure 2-15. Single Family Quantity Charges (FY 2013-14 to FY 2017-18)

| | | Proposed Monthly Charges - Per 1,000 Gallons | | | | |
|------------------|--------------------|--|----------|----------|----------|----------|
| | Gallons per Month | 1/1/2014 | 7/1/2014 | 7/1/2015 | 7/1/2016 | 7/1/2017 |
| Tier 1 | 0-5,000 gals | \$ 1.09 | \$ 1.25 | \$ 1.44 | \$ 1.60 | \$ 1.78 |
| Tier 2 | 5,001-14,000 gals | \$ 1.78 | \$ 2.05 | \$ 2.35 | \$ 2.61 | \$ 2.90 |
| Tier 3 | 14,001-21,000 gals | \$ 2.97 | \$ 3.42 | \$ 3.93 | \$ 4.36 | \$ 4.84 |
| Tier 4 (SFR-1) | 21,001-35,000 gals | \$ 5.44 | \$ 6.26 | \$ 7.19 | \$ 7.99 | \$ 8.86 |
| Tier 4 (SFR-2) | 21,001-53,000 gals | \$ 5.44 | \$ 6.26 | \$ 7.19 | \$ 7.99 | \$ 8.86 |
| Tier 4 (SFR-3) | 21,001-88,000 gals | \$ 5.44 | \$ 6.26 | \$ 7.19 | \$ 7.99 | \$ 8.86 |
| Tier 5 (All SFR) | Flow over Tier 4 | \$ 8.05 | \$ 9.00 | \$ 10.07 | \$ 11.01 | \$ 12.04 |

Multi Family Quantity Charges

A similar modeling methodology was used for calculating rates for the multi family customer class. **Figure 2-16** shows the projected rates. The breakpoints for Tiers 4 and 5 reflect the same adjustment for additional capacity as was made for the single family customers, in this case, however, by meter size, rather than by location.

Figure 2-16. Multi Family Quantity Charges (FY 2013-14 to FY 2017-18)

| | | Proposed Monthly Charges - Per 1,000 Gallons | | | | |
|------------------|--------------------------|---|-----------------|-----------------|-----------------|-----------------|
| | Gallons per Month | 1/1/2014 | 7/1/2014 | 7/1/2015 | 7/1/2016 | 7/1/2017 |
| Tier 1 | 0-5,000 gals | \$ 1.09 | \$ 1 25 | \$ 1 44 | \$ 1 60 | \$ 1 78 |
| Tier 2 | 5,001-14,000 gals | \$ 1.78 | \$ 2 05 | \$ 2.35 | \$ 2 61 | \$ 2 90 |
| Tier 3 | 14,001-21,000 gals | \$ 2 97 | \$ 3 42 | \$ 3 93 | \$ 4 36 | \$ 4 84 |
| Tier 4 (MFR-1) | 21,001-35,000 gals | \$ 5 44 | \$ 6 26 | \$ 7.19 | \$ 7 99 | \$ 8 86 |
| Tier 4 (MFR-2) | 21,001-88,000 gals | \$ 5 44 | \$ 6 26 | \$ 7 19 | \$ 7.99 | \$ 8.86 |
| Tier 4 (MFR-3) | 21,001-175,000 gals | \$ 5.44 | \$ 6 26 | \$ 7.19 | \$ 7 99 | \$ 8 86 |
| Tier 4 (MFR-4) | 21,001-280,000 gals | \$ 5.44 | \$ 6 26 | \$ 7 19 | \$ 7 99 | \$ 8 86 |
| Tier 4 (MFR-5) | 21,001-560,000 gals | \$ 5 44 | \$ 6.26 | \$ 7.19 | \$ 7.99 | \$ 8.86 |
| Tier 4 (MFR-6) | 21,001-875,000 gals | \$ 5 44 | \$ 6.26 | \$ 7.19 | \$ 7 99 | \$ 8 86 |
| Tier 4 (MFR-7) | 21,001-1,750,000 gals | \$ 5 44 | \$ 6 26 | \$ 7 19 | \$ 7.99 | \$ 8.86 |
| Tier 5 (All MFR) | Flow over Tier 4 | \$ 8.05 | \$ 9 00 | \$ 10 07 | \$ 11.01 | \$ 12.04 |

Non-Residential Quantity Charges

A similar modeling methodology was used for calculating rates for the non-residential customers. Figure 2-17 shows the projected rates. The breakpoints for Tiers 4 and 5 reflect the same adjustment for additional capacity as was made for the single family customers, in this case, however, by meter size, rather than by location.

Figure 2-17. Non-Residential Quantity Charges (FY 2013-14 to FY 2017-18)

| 3/4" Proposed Monthly Charges - Per 1,000 Gallons | | | | | | |
|---|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | Gallons per Month | 1/1/2014 | 7/1/2014 | 7/1/2015 | 7/1/2016 | 7/1/2017 |
| Tier 1 | 0-35,000 gals | \$ 1.09 | \$ 1.25 | \$ 1.44 | \$ 1.60 | \$ 1.78 |
| Tier 2 | 35,001-88,000 gals | \$ 4.39 | \$ 4.79 | \$ 5.23 | \$ 5.63 | \$ 6.07 |
| Tier 3 | 88,001-175,000 gals | \$ 5.58 | \$ 6.16 | \$ 6.81 | \$ 7.38 | \$ 8.01 |
| Tier 4 | Over 175,000 gals | \$ 6.69 | \$ 7.43 | \$ 8.28 | \$ 9.01 | \$ 9.82 |
| 1" Proposed Monthly Charges - Per 1,000 Gallons | | | | | | |
| | Gallons per Month | 1/1/2014 | 7/1/2014 | 7/1/2015 | 7/1/2016 | 7/1/2017 |
| Tier 1 | 0-35,000 gals | \$ 1.09 | \$ 1.25 | \$ 1.44 | \$ 1.60 | \$ 1.78 |
| Tier 2 | 35,001-88,000 gals | \$ 1.78 | \$ 2.05 | \$ 2.35 | \$ 2.61 | \$ 2.90 |
| Tier 3 | 88,001-175,000 gals | \$ 5.58 | \$ 6.16 | \$ 6.81 | \$ 7.38 | \$ 8.01 |
| Tier 4 | Over 175,000 gals | \$ 6.69 | \$ 7.43 | \$ 8.28 | \$ 9.01 | \$ 9.82 |
| 1 1/2" Proposed Monthly Charges - Per 1,000 Gallons | | | | | | |
| | Gallons per Month | 1/1/2014 | 7/1/2014 | 7/1/2015 | 7/1/2016 | 7/1/2017 |
| Tier 1 | 0-35,000 gals | \$ 1.09 | \$ 1.25 | \$ 1.44 | \$ 1.60 | \$ 1.78 |
| Tier 2 | 35,001-88,000 gals | \$ 1.78 | \$ 2.05 | \$ 2.35 | \$ 2.61 | \$ 2.90 |
| Tier 3 | 88,001-175,000 gals | \$ 2.97 | \$ 3.42 | \$ 3.93 | \$ 4.36 | \$ 4.84 |
| Tier 4 | Over 175,000 gals | \$ 6.69 | \$ 7.43 | \$ 8.27 | \$ 9.01 | \$ 9.82 |
| 2" through 8" Proposed Monthly Charges - Per 1,000 Gallons | | | | | | |
| | Gallons per Month | 1/1/2014 | 7/1/2014 | 7/1/2015 | 7/1/2016 | 7/1/2017 |
| Tier 1 | 0-35,000 gals | \$ 1.09 | \$ 1.25 | \$ 1.44 | \$ 1.60 | \$ 1.78 |
| Tier 2 | 35,001-88,000 gals | \$ 1.78 | \$ 2.05 | \$ 2.35 | \$ 2.61 | \$ 2.90 |
| Tier 3 | 88,001-175,000 gals | \$ 2.97 | \$ 3.42 | \$ 3.93 | \$ 4.36 | \$ 4.84 |
| Tier 4 (NR-4) | 175,001-280,000 gals | \$ 4.08 | \$ 4.69 | \$ 5.40 | \$ 5.99 | \$ 6.65 |
| Tier 4 (NR-5) | 175,001-560,000 gals | \$ 4.08 | \$ 4.69 | \$ 5.40 | \$ 5.99 | \$ 6.65 |
| Tier 4 (NR-6) | 175,001-875,000 gals | \$ 4.08 | \$ 4.69 | \$ 5.40 | \$ 5.99 | \$ 6.65 |
| Tier 4 (NR-7) | 175,001-1,750,000 gals | \$ 4.08 | \$ 4.69 | \$ 5.40 | \$ 5.99 | \$ 6.65 |
| Tier 4 (NR-8) | 175,001-2,485,000 gals | \$ 4.08 | \$ 4.69 | \$ 5.40 | \$ 5.99 | \$ 6.65 |
| Tier 5 | Flow over Tier 4 | \$ 6.69 | \$ 7.43 | \$ 8.27 | \$ 9.01 | \$ 9.82 |

2.5 COMPARISON OF PROPOSED CHARGES WITH NEIGHBORING AGENCIES

Figures 2-18 and 2-19 compare the City's proposed FY 2013-14 bills (including the City's proposed rate change effective January 1, 2014).

Figure 2-18. Residential Bill Comparison

| | Current Bill | Current (with Incr.) | Proposed Bill | Rocklin (PCWA) ¹ | Roseville ² | Folsom ¹ | San Juan WD ¹ |
|--|-----------------|-------------------------|------------------|--------------------------------|------------------------|---------------------|-----------------------------|
| Service Charge (3/4" Service) | \$22 90 | \$26 34 | \$23 40 | \$39 59 | \$20 10 | \$15 00 | \$35 19 |
| Volumetric Charge (5 Tgal/mo - Winter Median) | 0 00 | 0 00 | 5 44 | 9 05 | 3 08 | 7 56 | 3 14 |
| Total Bill | \$22 90 | \$26 34 | \$28 84 | \$48 64 | \$23 18 | \$22 56 | \$38 33 |
| Service Charge (3/4" Service) | \$22 90 | \$26 34 | \$23 40 | \$39 59 | \$20 10 | \$15 00 | \$35 19 |
| Volumetric Charge (14 Tgal/mo - Summer Median) | 14 12 | 16 24 | 21 46 | 26 06 | 11 30 | 20 52 | 8 53 |
| Total Bill | \$37 02 | \$42 57 | \$44 87 | \$65 65 | \$31 40 | \$35 52 | \$43 72 |
| Service Charge (3/4" Service) | \$22 90 | \$26 34 | \$23 40 | \$39 59 | \$20 10 | \$15 00 | \$35 19 |
| Volumetric Charge (35 Tgal/mo - PCWA Contract Limit) | 89 75 | 103 21 | 119 61 | 70 05 | 37 58 | 58 80 | 28 96 |
| Total Bill | \$112 65 | \$129 55 | \$143 01 | \$109 64 | \$57 68 | \$73 80 | \$64 15 |

¹ Rate effective January 1, 2013² Rate effective July 1, 2013**Figure 2-19. Non-Residential Bill Comparison**

| | Current Bill | Current (with Incr.) | Proposed Bill | Rocklin (PCWA) ¹ | Roseville ² | Folsom ¹ | San Juan WD ¹ |
|---------------------------------|-----------------|-------------------------|------------------|--------------------------------|------------------------|---------------------|-----------------------------|
| Service Charge (3/4" Service) | \$22 90 | \$26 34 | \$23 40 | \$39 59 | \$20 10 | \$16 62 | \$35 19 |
| Volumetric Charge (11 Tgal/mo) | 3 53 | 4 06 | 11 99 | 19 20 | 12 9 | 16 8 | 9 64 |
| Total Bill | \$26 43 | \$30 39 | \$35 39 | \$58 79 | \$33 00 | \$33 42 | \$44 83 |
| Service Charge (2" Service) | \$22 90 | \$26 34 | \$187 21 | \$181 28 | \$98 65 | \$84 29 | \$149 94 |
| Volumetric Charge (76 Tgal/mo) | 240 18 | 276 21 | 111 13 | 132 12 | 87 72 | 114 24 | 65 55 |
| Total Bill | \$263 08 | \$302 54 | \$298 34 | \$313 40 | \$186 37 | \$198 53 | \$215 49 |
| Service Charge (4" Service) | \$22 90 | \$26 34 | \$585 05 | \$525 06 | \$305 10 | \$259 82 | \$455 70 |
| Volumetric Charge (300 Tgal/mo) | 1262 20 | 1451 53 | 900 88 | 523 81 | 344 86 | 449 12 | 252.63 |
| Total Bill | \$1,285 10 | \$1,477 87 | \$1,485 93 | \$1,048 87 | \$649 96 | \$708 94 | \$708 33 |

¹ Rate effective January 1, 2013² Rate effective July 1, 2013

3. WASTEWATER RATES

3.1 BACKGROUND

The City provides wastewater conveyance and treatment services to the City's 16,000 accounts through a system of pipelines and pump stations that transport their wastewater to the City's treatment facilities. The City currently charges customers \$32.08 per equivalent dwelling unit (EDU) per month. An EDU is defined as a single-family residential unit. Therefore, single-family residential accounts pay \$32.08 per month and multi-family residential accounts pay \$32.08 per month for each dwelling unit within the multi-family complex. Non-residential customers are charged the per EDU rate of \$32.08 based on the number of EDU's determined by City staff using various criteria (e.g., square footage, number of fixtures).

3.2 REVENUE REQUIREMENT PROJECTIONS

To determine whether additional rate revenue is required, projected operating and capital expenses are compared with projected revenue from current rates. Rates are then increased so that expenses are covered and operating and capital reserves are maintained.

Key Assumptions

The City's FY 2012-13 budget served as the basis for determining the revenue requirement projections for the five-year planning period from FY 2013-14 through FY 2017-18. **Figure 3-1** summarizes the projected expenditure trends, which are noteworthy in the following respects:

Wastewater Treatment Expense

The largest operating expense covered by the wastewater rate is the cost to treat the wastewater at the City's Wastewater Treatment and Reclamation Facility (WWTRF). The majority of the \$3 million annual expense for wastewater treatment is for unpredictable utility and chemical expenses which are beyond the control of the City. Wastewater treatment expenses were assumed to increase at an inflationary rate of 3.0% per year during the 5-year projection period.

Salaries and Benefits Expense

The City's budget for existing personnel as of FY 2012-13 served as the starting point for projecting operating and administrative wage and benefit expenses. It should be noted that the City's FY 2012-13 budget includes the proposed addition of three new wastewater technicians and an allocation of 35% and 45% of an Environmental Services Manager and a Senior Engineer, respectively. For FY 2013-14 through FY 2017-18, the salaries and benefits for the existing and proposed staff were assumed to increase 1.54%

- 4.73% per year due to increases in health care premiums, workers' compensation insurance rates, and wage rates.

Operations and Maintenance Expense

The City's operations and maintenance expenses (excluding salaries, benefits, and treatment costs) budget for FY 2012-13 served as the starting point for projecting operations and maintenance expenses (O&M). Generally, on-going maintenance and operations expenses were generally increased by 3.0% per year to approximate inflationary increases.

Debt Service

Existing debt service is paid off in FY 2015-16 and there are no plans to issue additional debt for wastewater capital projects. The City plans to fund future capital improvements of existing infrastructure on a pay-as-you-go (PayGo) basis using a portion of annual rate revenue and available reserves.

Capital Replacement Fund

The majority of the capital replacement fund expense comprises pay-as-you-go (PAYGo) funding for capital improvement projects. The City plans to fund future capital improvements of existing infrastructure on a PAYGo basis using a portion of annual rate revenue and available reserves. Capital improvements are projected on average to total \$430,000 annually over the five-year period.

PAYGo funding is less expensive because it avoids financing costs. It is also appropriate for the type of capital improvements, which are on-going renewals and replacements that are needed to keep pace with depreciation. Larger, periodic capital projects such as major new facilities are more appropriate candidates for debt financing. Existing debt service is minimal and will be retired in FY 2015-16; there are no plans to issue additional debt for sewer capital projects.

Other Expenditures

The other expenditures are comprised of the Wastewater enterprise's share of the corp yard bond payment, debt service, annual OPEB obligation, and a transfer of \$270,000 FY 2012-13 and \$500,000 in FY2013-14 for infrastructure improvements.

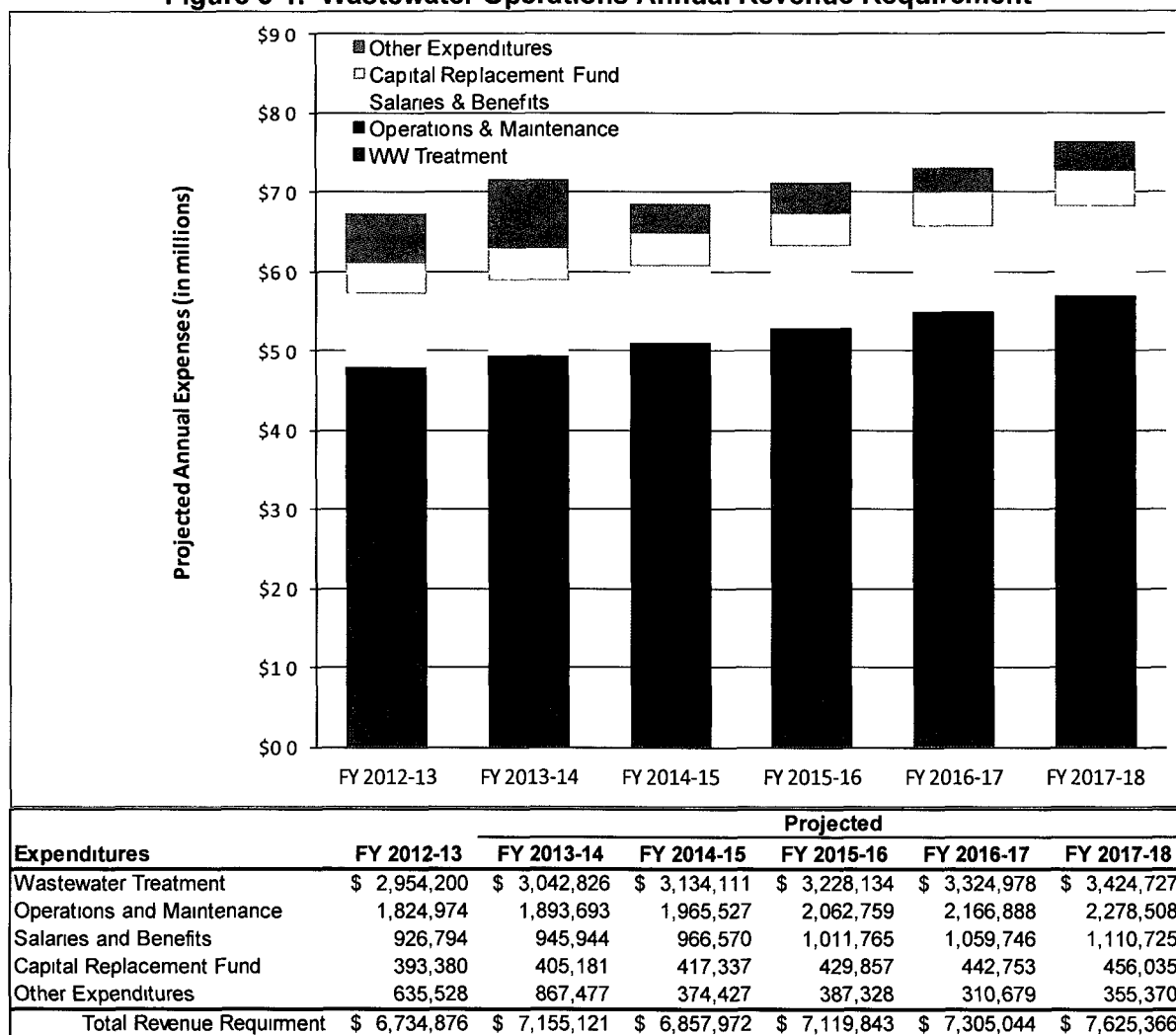
Figure 3-1. Wastewater Operations Annual Revenue Requirement

Figure 3-2 summarizes the projected revenue requirements, revenue from current rates (i.e., without any rate increases), annual surpluses and deficits, and the fund balance before rate increases. **Figure 3-2** also shows the projected revenue increases to offset future deficits so that the wastewater reserves are maintained at an adequate level (see discussion on the adequate level of reserves). The rate adjustments that are projected would become effective July 1 of each year.

Figure 3-2. Wastewater Revenue Increases

| | FY 2012-13 | FY 2013-14 | FY 2014-15 | Projected | | |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | | | FY 2015-16 | FY 2016-17 | FY 2017-18 |
| Revenue Requirement | \$6,734,876 | \$7,155,121 | \$6,857,972 | \$7,119,843 | \$7,305,044 | \$7,625,366 |
| Revenue from Current Rates | \$7,061,404 | \$7,098,519 | \$7,135,633 | \$7,172,748 | \$7,209,862 | \$7,246,977 |
| Surplus/(Deficit) | \$326,528 | (\$56,603) | \$277,662 | \$52,905 | (\$95,182) | (\$378,389) |
| Fund Balance (before increases) | \$7,634,029 | \$7,032,294 | \$6,818,845 | \$6,378,466 | \$5,813,219 | \$4,950,050 |
| Revenue Increase | 0.0% | 0.0% | 2.8% | 2.7% | 2.6% | 2.5% |
| Revenue from Increase | \$0 | \$0 | \$181,057 | \$379,601 | \$579,167 | \$779,750 |
| Fund Balance (after increases) | \$7,634,029 | \$7,032,294 | \$7,000,355 | \$6,942,382 | \$6,967,733 | \$6,903,656 |

The revenue increases would ordinarily be applied across-the-board to the current residential and non-residential service charges. However, based on the results of the cost of service analysis conducted (and summarized in Section 3.4), only the non-residential rate shall be adjusted to generate the revenue increases necessary. In this way, by FY 2017-18, each customer class will pay its proportionate share of the costs.

Operating and Capital Reserve Funds

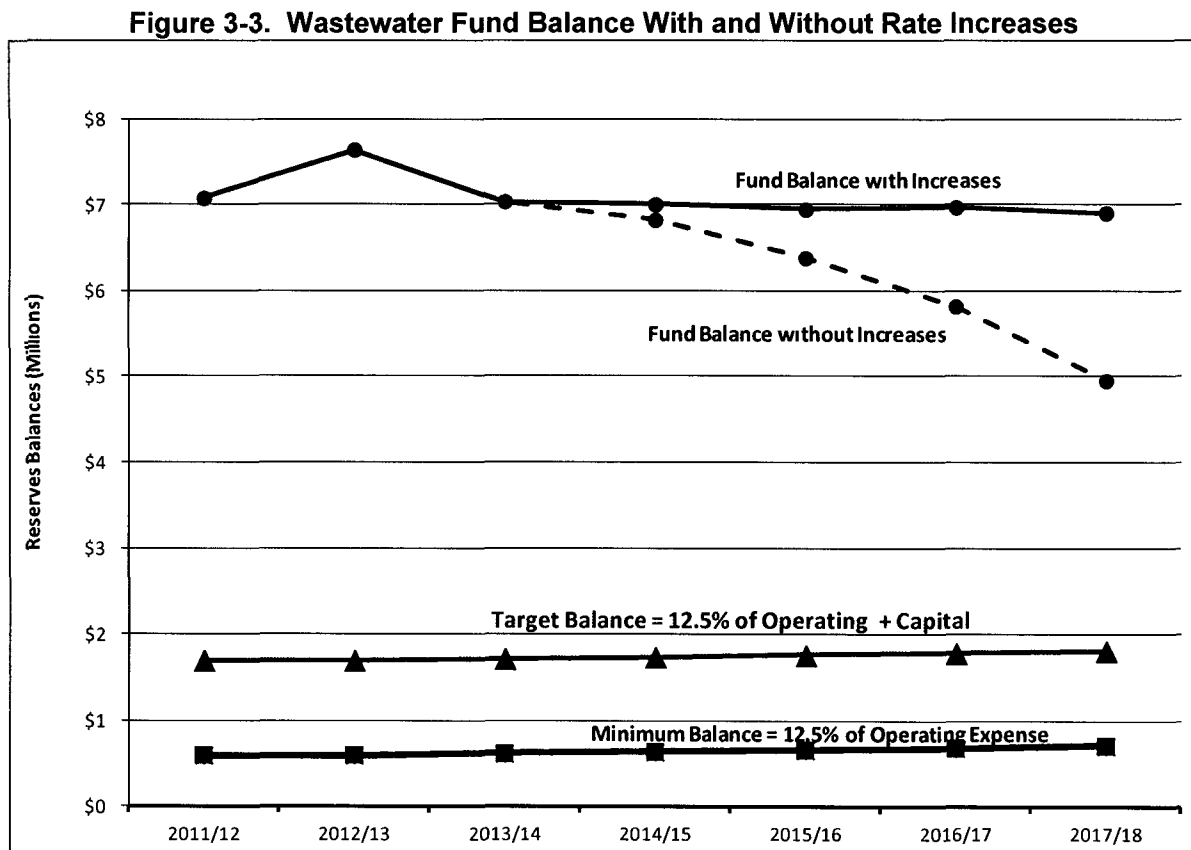
The revenue increases indicated in **Figure 3-2** are required to offset the City's increased costs and to maintain adequate reserves. It is the City's practice to maintain two reserve funds for wastewater operations: an operating reserve and a capital replacement reserve. For purposes of rate setting, the following combined reserve target balances were established.

- **Minimum Balance.** The Minimum Balance is based on the amount of revenue that is needed to provide month-to-month cash flow for O&M expenses. By maintaining this minimum reserve, the enterprise is able to meet its cash flow without borrowing from the General Fund. The fund balance should never drop below the Minimum Balance, which is currently about \$600,000. The Minimum Balance is based on the bill frequency. For utilities that bill monthly, a minimum of approximately six weeks of O&M expenses is recommended.
- **Target Balance.** The Target Balance is the Minimum Balance plus an additional cash margin for capital improvements so that sufficient funds are available to pay for ongoing PAYGo projects without cash flow constraints. The capital component is set to 1.5 times the average annual PAYGo expenditures, which is about \$1.1 million; therefore, the Target Balance is currently about \$1,700,000.

Figure 3-3 shows the combined fund balance for the operating and capital improvement reserves compared with the target balances. The line labeled "Minimum Balance" represents the operating reserve target balance. The line labeled "Target Balance"

(diamond symbols) is the sum of the target balances for the Operating Reserve in the Capital Improvement Reserve.

Figure 3-3 indicates that the fund balance is currently, and will remain, above the target balance. In this way, the increased operating and capital costs that are projected will be covered throughout the planning period. As described in Section 3.4 below, the additional revenue throughout the planning period is the result of growth and increases to non-residential rates.



3.3 COST OF SERVICE ANALYSIS

The City's current wastewater rates determine how much of the total revenue requirement is paid by each customer class (e.g., single-family residents, multi-family residents, commercial accounts, industrial accounts). A cost of service analysis determines how much each class should pay based on its respective share of flow and wastewater strength (i.e., biochemical oxygen demand and total suspended solids, the standard measures of wastewater strength). A cost of service analysis should be conducted periodically to account for any material changes in the loadings.

Allocation of Costs to Functions

The cost of service analysis is a process by which expenses (i.e., the City's FY 2013-14 revenue requirement) are allocated to the four functions that represent the services the City provides to customers. Three of the functions are related to the "loading" on the collection system and treatment facility produced by the volume and strength of wastewater; the fourth function is related to customer accounts. The revenue requirement is allocated to functional categories that represent the functions performed by the City's facilities: customer accounts (i.e., customer service activities, which includes billing), flow, biochemical oxygen demand (BOD), and total suspended solids (TSS), as shown in **Figure 3-4**.

When each of these functionalized costs is divided by the associated units of service, the unit costs of service are derived. For example, the unit cost per parcel to service accounts is \$12.07 per year; the unit cost per thousand gallons of flow is \$3.55, as shown in **Figure 3-4**. The unit costs are independent of customer class. In other words, the unit cost to treat flow is the same regardless of customer class because it represents the average for all customers. The unit costs are not rates, however. Unit costs are used to determine each class' share of the revenue requirement based on each class' required services. The rate design determines how the revenue requirement is paid for by each customer depending on which class of service it belongs.

Figure 3-4. Wastewater Allocation of FY 2013-14 Costs to Functions

| | FY 2013-14 Rev Req | Alloc Type | Allocation Factors | | | | | Allocated Costs | | | | |
|--|-----------------------|---------------|------------------------------------|-------|-------|-------|-------|-------------------|---------------------|---------------------|---------------------|---------------------|
| | | | Accounts | Flow | BOD | TSS | Total | Accounts | Flow | BOD | TSS | Total |
| Direct Expense Allocations | | | | | | | | | | | | |
| Treatment Plant | | | | | | | | | | | | |
| Professional Services | \$ 3,042,826 | 1 | 0% | 40 0% | 30 0% | 30 0% | 100% | \$ - | \$ 1,217,130 | \$ 912,848 | \$ 912,848 | \$ 3,042,826 |
| Debt Service | 150,208 | 1 | 0% | 40 0% | 30 0% | 30 0% | 100% | - | 60,083 | 45,062 | 45,062 | 150,208 |
| Subtotal - Treatment Plant | 3,193,034 | | | | | | | - | 1,277,214 | 957,910 | 957,910 | 3,193,034 |
| Customer Accounts | | | | | | | | | | | | |
| Admin Services - Utility Billing | 160,582 | 3 | 100% | 0 0% | 0 0% | 0 0% | 100% | 160,582 | - | - | - | 160,582 |
| Subtotal - Customer Accounts | 160,582 | | | | | | | 160,582 | - | - | - | 160,582 |
| Collection System | | | | | | | | | | | | |
| Public Services - Operations | 1,929,403 | 2 | 0% | 90 0% | 5 0% | 5 0% | 100% | - | 1,736,463 | 96,470 | 96,470 | 1,929,403 |
| Transfer to Capital Proj Reserve | 405,181 | 2 | 0% | 90 0% | 5 0% | 5 0% | 100% | - | 364,663 | 20,259 | 20,259 | 405,181 |
| Subtotal - Collection System | 2,334,584 | | | | | | | - | 2,101,126 | 116,729 | 116,729 | 2,334,584 |
| Total Direct Expenses | \$ 5,688,201 | | | | | | | \$ 160,582 | \$ 3,378,340 | \$ 1,074,639 | \$ 1,074,639 | \$ 5,688,201 |
| Composite Expense/(Revenue) Allocations | | | % of Total Direct Expenses | | | | | 2 8% | 59 4% | 18 9% | 18 9% | 100 0% |
| Public Services - Engineering | \$ 133,581 | 4 | 3% | 59% | 19% | 19% | 100% | \$ 3,771 | \$ 79,336 | \$ 25,237 | \$ 25,237 | \$ 133,581 |
| Public Services - Administration | 90,330 | 4 | 3% | 59% | 19% | 19% | 100% | 2,550 | 53,649 | 17,065 | 17,065 | 90,330 |
| City Attorney | 24,720 | 4 | 3% | 59% | 19% | 19% | 100% | 698 | 14,682 | 4,670 | 4,670 | 24,720 |
| Finance - Retiree Health Benefits | 30,650 | 4 | 3% | 59% | 19% | 19% | 100% | 865 | 18,204 | 5,791 | 5,791 | 30,650 |
| OPEB Expense | 121,270 | 4 | 3% | 59% | 19% | 19% | 100% | 3,424 | 72,025 | 22,911 | 22,911 | 121,270 |
| Allocated Costs - General Fund | 451,280 | 4 | 3% | 59% | 19% | 19% | 100% | 12,740 | 268,025 | 85,258 | 85,258 | 451,280 |
| Transfer to Fund #915 & 970 | 92,673 | 4 | 3% | 59% | 19% | 19% | 100% | 2,616 | 55,040 | 17,508 | 17,508 | 92,673 |
| Transfer out | 500,000 | 4 | 3% | 59% | 19% | 19% | 100% | 14,115 | 296,960 | 94,462 | 94,462 | 500,000 |
| Transfer to/(from) Operating Reserves | (3,246) | 4 | 3% | 59% | 19% | 19% | 100% | (92) | (1,928) | (613) | (613) | (3,246) |
| Total Composite Expenses | 1,441,258 | | | | | | | 40,688 | 855,993 | 272,289 | 272,289 | 1,441,258 |
| | | | % of Total Net Revenue Requirement | | | | | 2 8% | 59 4% | 18 9% | 18 9% | 100 0% |
| Total Direct and Composite Expenses | \$ 7,129,459 | | A | | | | | \$ 201,270 | \$ 4,234,332 | \$ 1,346,928 | \$ 1,346,928 | \$ 7,129,459 |

Allocation Types.

- 1 - Treatment Plant
- 2 - Direct attribution with HF&H estimate of flow, BOD, and TSS
- 3 - Customer Account Allocations - Direct attribution
- 4 - Composite Expense Allocation Composite of 1, 2, 3

Unit Cost Calculations

| Units of Service | B | 16,682 | 1,193,050 | 2,541,612 | 2,419,009 |
|--------------------|------------|----------|-----------|-----------|-----------|
| Unit Type | Accounts | Tgals | Pounds | Pounds | |
| Unit Costs (A - B) | \$12 07 | \$3 55 | \$0 53 | \$0 56 | |
| | \$/Account | \$/Tgals | \$/lb | \$/lb | |

Customer Class Loadings

Wastewater flows from individual customers are not metered; therefore winter water use data for residential customers is the closest representation of flows that customers discharge to the City's system for conveyance and treatment. The assumption is that residents use minimal outside or irrigated water during the winter period. A full twelve months of actual water flows were used for non-residential customers. HF&H obtained the metered water data from City and summarized the data by customer class. The respective flow data was then multiplied by the strength concentrations stipulated by the State Water Resources Control Board's *Guidelines*² to determine the total loadings on the system for each customer class; **Figure 3-5** presents the results of this calculation.

² State Water Resources Control Board *Revenue Program Guidelines*. Appendix G 1979

Figure 3-5. Wastewater Customer Class Loadings

| Figure 3-6. Wastewater Customer Class Loadings | | | | | | |
|--|----------------------|---------------|--------------|-------------|------------------|------------------|
| Customer Class | Accounts Accounts | Flow Tgals | Mass Balance | | Total BOD lbs | Total TSS lbs |
| | | | BOD mg/l | TSS mg/l | | |
| Residential | | | | | | |
| SFR | 16,270 | | | | | |
| MFR | 92 | | | | | |
| Total Residential | 16,362 | 960,110 | 260 | 240 | 2,083,150 | 1,922,908 |
| Non-Residential | | | | | | |
| Average Strength | 276 | 202,582 | 200 | 200 | 338,110 | 338,110 |
| High Strength | 44 | 30,358 | 475 | 624 | 120,352 | 157,991 |
| Total Non-Residential | 320 | 232,940 | 236 | 1426 | 458,462 | 496,101 |
| Total | 16,682 | 1,193,050 | 255 | 243 | 2,541,612 | 2,419,009 |

Revenue Requirement Allocation

In a cost of service analysis, all customer classes are treated equally through the application of the same unit costs, which is the fundamental purpose of cost of service analysis. A cost of service analysis fairly distributes the revenue requirement to each customer class, after which rates can be designed to generate the revenue required of each class. **Figure 3-6** presents the results of the revenue requirement allocation, which is calculated for each customer class by multiplying the per unit costs by customer class loadings from **Figure 3-5** above.

Figure 3-6. Wastewater Revenue Requirement Allocations to Customer Classes

| | FY 12-13 Cost-of-Service per Unit | | | | Total Cost of Service |
|--|--|---------------------|---------------------|---------------------|------------------------------|
| | Accounts | Flow | BOD | TSS | |
| Cost of Service per Unit (from Figure 4-2) | per account | per Tgals | per lb | per lb | |
| | \$12.07 | \$3.55 | \$0.53 | \$0.56 | |
| Residential | \$ 197,409 | \$ 3,407,588 | \$ 1,103,966 | \$ 1,070,694 | \$5,779,658 |
| Non-Residential | | | | | |
| Average Strength | 3,330 | 718,998 | 179,181 | 188,263 | 1,089,773 |
| High Strength | 531 | 107,746 | 63,781 | 87,971 | 260,028 |
| Total Non-Residential | 3,861 | 826,744 | 242,962 | 276,234 | 1,349,801 |
| Total Revenue Requirement | \$ 201,270 | \$ 4,234,332 | \$ 1,346,928 | \$ 1,346,928 | \$ 7,129,459 |

Figure 3-7 compares the cost of service allocations (from **Figure 3-6**) with the projected revenue for FY 2013-14 under the existing rate structure. The difference indicates whether a class is paying more or less than its share of the cost of service. The analysis indicates that the non-residential customers are paying less than their share of the cost of service.

Figure 3-7. Wastewater FY 2013-14 Cost of Service Comparison

| Customer Class | Current EDUs | Current Rate <i>per EDU</i> | Current Revenue | Cost of Service <i>(from Figure 4-4)</i> | \$ Variance | % Variance |
|---------------------------|-----------------|-----------------------------------|--------------------|--|----------------|---------------|
| Residential | 17,066 | \$ 32.08 | \$ 6,569,727 | \$ 5,779,658 | \$ (790,069) | -12% |
| Non-Residential | 1,454 | \$ 32.08 | \$ 559,732 | \$ 1,349,801 | \$ 790,069 | 141% |
| Total Revenue Requirement | | | \$ 7,129,459 | \$ 7,129,459 | | |

3.4 RATE DESIGN/RATE INCREASES

After each class' share of the revenue requirement was determined by the cost of service analysis (see **Figure 3-6**), rates can be designed to ensure that each class' rates generate its respective share of the cost of service.

Residential

The current per EDU rate for residential customers is sufficient to cover the cost of service calculated in **Figure 3-6** for residential customers during the five-year projection period; therefore, no change to the rate design or per EDU rate is recommended during the five-year projection period.

Non-Residential

As shown in **Figure 3-7**, current non-residential rate revenue is not sufficient to cover the cost to provide such service to non-residential customers. Therefore, we are recommending the following modifications to the rate design and recommending the phasing in of rate increases over the five-year projection period to generate sufficient revenue to cover the cost of service by FY 2017-18.

The common rate design objectives are rate payer equity, financial stability, legal compliance, administrative simplicity, and customer understanding. Of these five objectives, balancing rate payer equity with financial stability requires the greatest discretion. Rate payer equity can be improved through the flow charge, which reflects differences in flow among customers. However, the more revenue that is associated with flow, the less stable the revenue will be from year to year. In addition, if the fixed charge is too low, customers with very low flow will pay bills that are far below the baseline fixed cost of service.

In the City's case, we recommended a fixed charge per account (rather than per EDU) for non-residential accounts which will remain the same, at \$32.08 per account, during the five-year projection period. In addition, we recommend implementing flow-based charges for non-residential customers based on the strength of the discharge being transported and processed. The increases in the flow-based charges are being phased-in over the planning period.

Figure 3-8 summarizes the recommended residential and non-residential monthly charges for the five-year projection period and the projected revenue generated. As shown in **Figure 3-8**, the proposed monthly charges are projected to generate sufficient non-residential revenue (\$1,371,005 by FY 2017-18) to cover the non-residential cost of service of \$1,349,901 (as shown in **Figure 3-7**).

Figure 3-8. Wastewater Proposed Monthly Charges

| Customer Class | Current | Proposed Monthly Charges | | | | |
|-----------------------------|----------------|--------------------------|--------------|--------------|--------------|--------------|
| | Monthly Charge | FY 13-14 | FY 14-15 | FY 15-16 | FY 16-17 | FY 17-18 |
| Residential | | | | | | |
| Single Family (per EDU) | \$32 08 | \$32 08 | \$32 08 | \$32 08 | \$32 08 | \$32 08 |
| Multi Family (per EDU) | \$32 08 | \$32 08 | \$32 08 | \$32 08 | \$32 08 | \$32 08 |
| Non-Residential | | | | | | |
| Fixed Charge (per Account) | \$32 08 | \$32 08 | \$32 08 | \$32 08 | \$32 08 | \$32 08 |
| Flow Charge | | | | | | |
| Average Strength (per Tgal) | \$0 00 | \$1 46 | \$2 33 | \$3 19 | \$4 05 | \$4 92 |
| High Strength (per Tgal) | \$0 00 | \$4 62 | \$5 48 | \$6 35 | \$7 21 | \$8 07 |
| Revenue from Rates | | | | | | |
| Residential | | \$ 6,569,727 | \$ 6,602,576 | \$ 6,635,589 | \$ 6,668,767 | \$ 6,702,111 |
| Non-Residential | | 559,732 | 761,035 | 963,345 | 1,166,667 | 1,371,005 |
| | | \$ 7,129,459 | \$ 7,363,611 | \$ 7,598,934 | \$ 7,835,434 | \$ 8,073,116 |

Note: Projected residential revenue reflects growth in accounts, Projected non-residential revenue reflects growth in accounts, as well as the recommended rate increase

3.5 COMPARISON OF PROPOSED CHARGES WITH NEIGHBORING AGENCIES

Figure 3-9 compares the City's proposed FY 2013-14 rates (with the City's proposed rate change effective January 1, 2014) for all residents and typical average- and high-strength non-residential customers.

Figure 3-9. Wastewater Monthly Customer Bill Comparison (FY 2013-14)

| Customer Class | Average Monthly Flow (Tgals) | Lincoln (current) | Lincoln (proposed) | Auburn | Loomis ¹ | Rocklin ¹ | Roseville ^{1,2} |
|---|------------------------------|-------------------|--------------------|---------------|---------------------|----------------------|--------------------------|
| Residential | | | | | | | |
| Single Family | | \$32 08 | \$32 08 | \$61 38 | \$28 00 | \$28 00 | \$29 85 |
| Multi Family | | \$32 08 | \$32 08 | \$61 38 | \$28 00 | \$28 00 | \$29 85 |
| Non-Residential | | | | | | | |
| Church | 5 | \$32 08 | \$39 15 | not available | \$28 00 | \$28 00 | \$29 85 |
| Large Retailer | 165 | \$32 08 | \$273 02 | not available | \$28 00 | \$28 00 | \$658 13 |
| Small Grocery Store* | 4 | \$64 16 | \$50 16 | not available | \$56 00 | \$56 00 | \$59 70 |
| Restaurant* | 93 | \$417 04 | \$461 34 | not available | \$364 00 | \$364 00 | \$729 88 |
| Large Grocery Store* | 176 | \$433 08 | \$845 60 | not available | \$378 00 | \$378 00 | \$1,077 55 |
| ¹ Rate effective 7/1/2013 | | | | | | | |
| ² Customers served by the City of Roseville | | | | | | | |
| ³ Flow charge applies to water use in excess of 10 Hundred Cubic Feet per month for metered commercial customers | | | | | | | |
| *Denotes high strength customer | | | | | | | |

Note: Non-residential charge based on May 2011 through April 2012 average monthly flows

4. SOLID WASTE RATES

4.1 BACKGROUND

The City provides residential and commercial solid waste and residential yard waste collection to the City's 16,000 accounts. The City currently charges its residents \$19.98 per month for once-a-week servicing of 90-gallon solid waste container and a 64- or 90-gallon yard waste container. The solid waste container is delivered to the Western Placer Waste Management Authority (WPWMA) material recovery facility (MRF) on Athens Road, where it is sorted and recyclable materials are separated and recycled. Non-residential customers are charged a monthly rate based on their subscription level (e.g., 1 cubic yard bin, serviced 1 time per week; 3 cubic yard bin, serviced 3 times per week).

4.2 REVENUE REQUIREMENT PROJECTIONS

To determine whether additional rate revenue is required, projected operating and capital expenses are compared with projected revenue from current rates. Rates are then increased so that the expenses are covered and operating and capital reserves are maintained.

Key Assumptions

The City's FY 2012-13 budget served as the basis for determining the revenue requirement projections for the five-year planning period from FY 2013-14 through FY 2017-18. **Figure 4-1** summarizes the projected expenditure trends, which are noteworthy in the following respects:

Disposal and Processing

Disposal and processing costs increase 2.1% annually based on: 1) planned per-ton tip fee increases at the WPWMA MRF; and, 2) projected increases in volume of materials collected and processed.

Salaries and Benefits

The City's FY 2012-13 budget includes the proposed addition of an Environmental Services Manager and a Senior Engineer which shall be shared with the water and wastewater utilities. The solid waste enterprise has been allocated 30% of the Environmental Services Manager and 10% of the Senior Engineer (approximately \$78,000 per year). Salaries and benefits for the existing and proposed staff were assumed to increase an average of 1.8% - 4.7% per year due to the projected increases in health care premiums, workers' compensation insurance rates, and wage rates.

Operations and Maintenance Expense

The majority of the City's operations and maintenance expenses (excluding salaries and benefits) are projected to gradually increase during the planning period at the projected rate of inflation. Cost increases greater than inflation include: an additional 640 hours of leaf collection per year (annual average of \$38,000); and, additional landfill maintenance expenses (annual average of \$128,000).

Debt Service

The solid waste enterprise does not currently have any debt service, nor are there plans to incur debt to finance collection vehicle purchases during the planning period.

Capital Replacement Fund

The majority of the capital replacement fund expense comprises pay-as-you-go (PAYGo) funding for collection vehicles. The City plans to fund future vehicle and collection container purchases on a PAYGo basis using a portion of annual rate revenue and available reserves.

Other Expenditures

The other expenditures are comprised of the Solid Waste enterprise's share of the corp yard bond payment, annual OPEB obligations, and annual landfill maintenance expenses related to the City's old landfill located on Virginiatown Road.

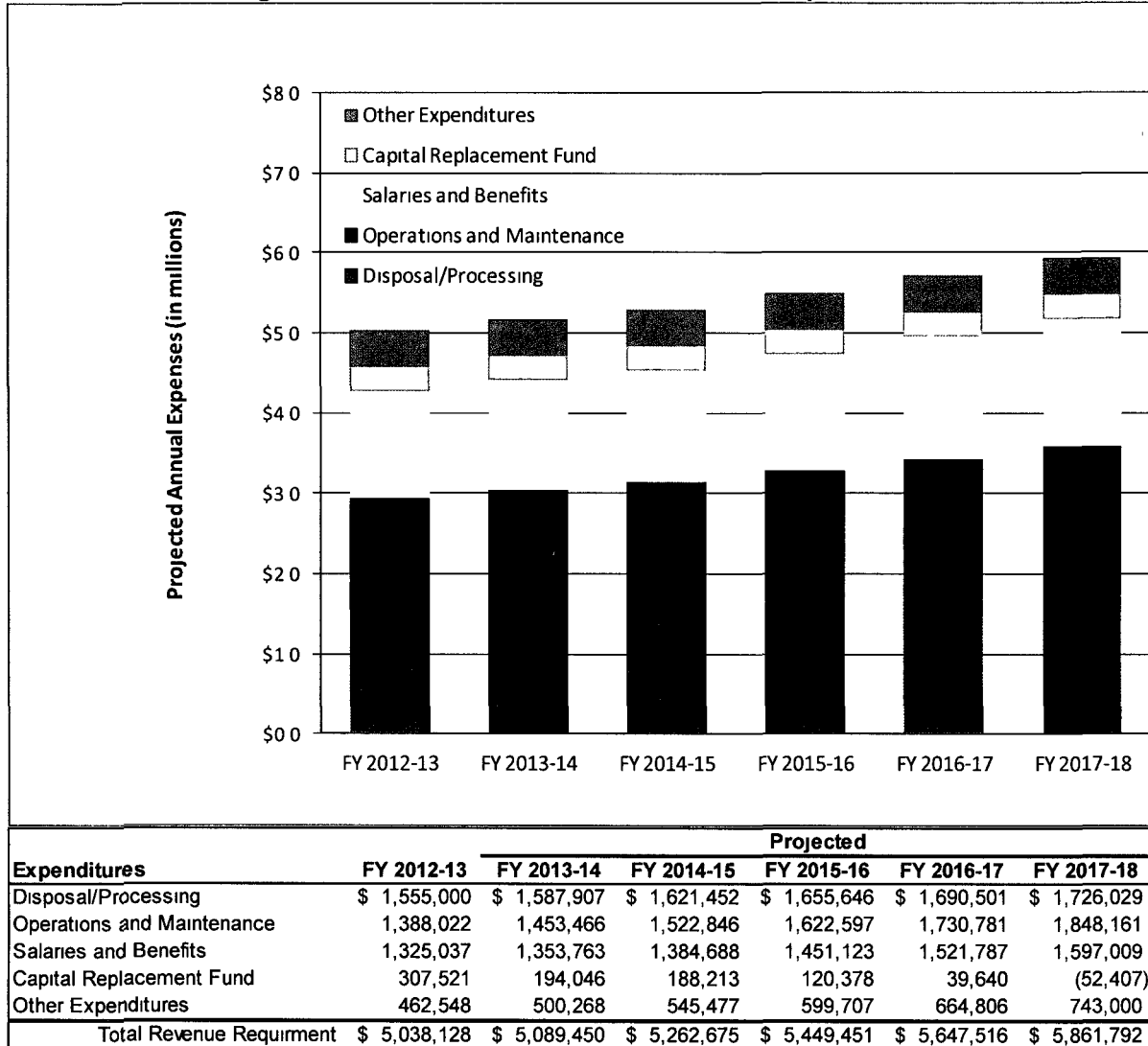
Figure 4-1. Solid Waste Annual Revenue Requirement

Figure 4-2 summarizes the projected revenue requirements, revenue from current rates (i.e., without any rate increases), annual surpluses and deficits, and the fund balance before rate increases. **Figure 4-2** also shows the projected revenue increases to offset future deficits so that the solid waste reserves are maintained at an adequate level (see Section 4.3 for discussion on the adequate level of reserves). The rate increases that are projected would become effective July 1 of each year, with the exception of the FY 2013-14 increase which would become effective January 1, 2014 (six months into the fiscal year).

Figure 4-2. Solid Waste Revenue Increases

| | FY 2012-13 | FY 2013-14 | FY 2014-15 | Projected | | |
|---------------------------------|-------------|-------------|-------------|-------------|---------------|---------------|
| | | | | FY 2015-16 | FY 2016-17 | FY 2017-18 |
| Revenue Requirement | \$5,038,128 | \$5,089,450 | \$5,262,675 | \$5,449,451 | \$5,647,516 | \$5,861,792 |
| Revenue from Current Rates | \$4,757,964 | \$4,786,851 | \$4,815,738 | \$4,844,625 | \$4,873,512 | \$4,902,399 |
| Surplus/(Deficit) | (\$280,164) | (\$302,599) | (\$446,937) | (\$604,827) | (\$774,004) | (\$959,393) |
| Fund Balance (before increases) | \$1,681,814 | \$797,424 | \$13,718 | (\$726,432) | (\$2,016,398) | (\$3,297,844) |
| Revenue Increase | 0.0% | 6.0% | 6.0% | 5.0% | 5.0% | 5.0% |
| Revenue from Increase | \$0 | \$143,606 | \$595,225 | \$870,967 | \$1,163,644 | \$1,474,188 |
| Fund Balance (after increases) | \$1,681,814 | \$941,389 | \$753,676 | \$886,068 | \$763,215 | \$959,263 |

To generate the necessary revenue to maintain the reserve fund balance noted in **Figure 4-2** above, the percent increases noted can be applied across-the-board to all current residential and commercial solid waste service rates. However, it may be necessary to increase residential rates by a different percentage than commercial rates if the City's current rate structure is not designed so that each customer class is paying its proportionate share of the total revenue requirement calculated above. Section 4.3 of this report summarizes the cost of service analysis conducted to apportion the revenue requirement to each customer class (e.g., residential and commercial) and the resulting rate increases.

Operating and Capital Reserve Funds

The revenue increases indicated in **Figure 4-2** are required to offset the City's increased costs and to maintain adequate reserves. Rates must be set so that the fund balance achieves the target balances for the reserve funds. It is the City's practice to maintain two reserve funds for solid waste operations: an operating reserve and a capital replacement reserve.

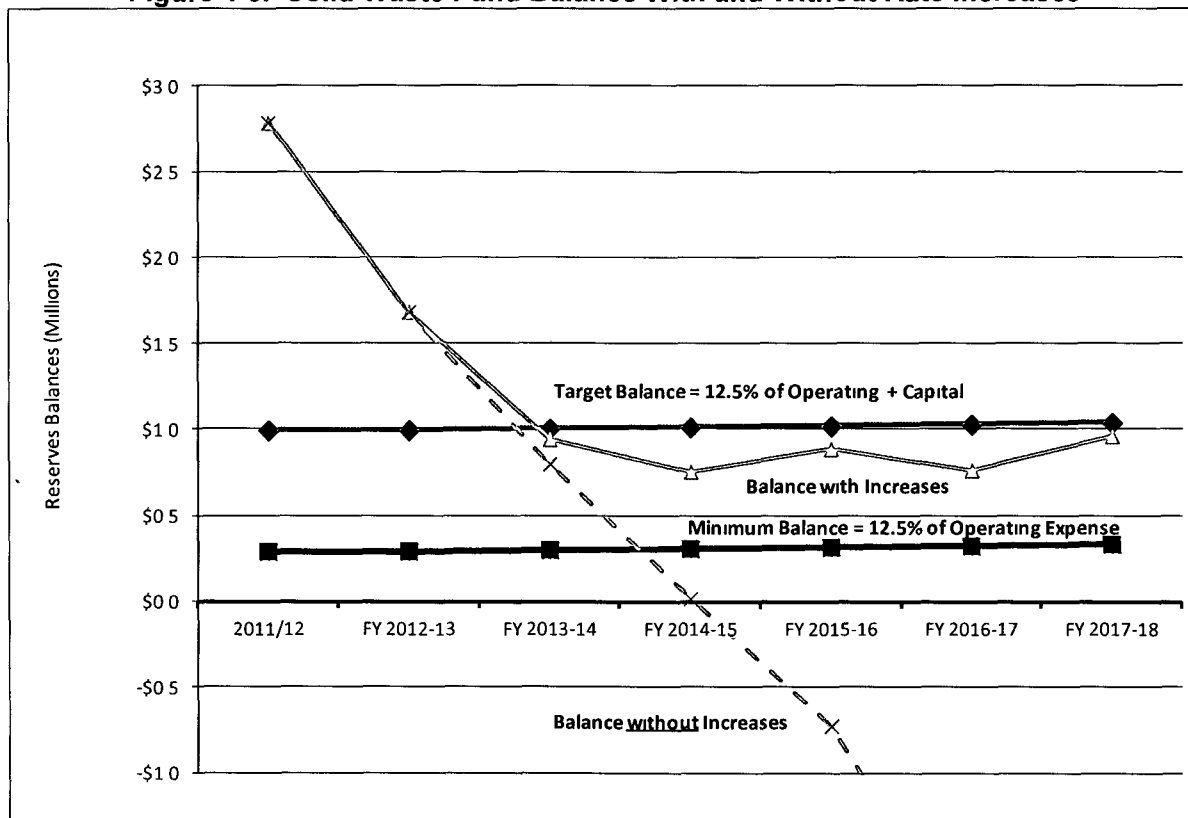
- Minimum Balance.** The Minimum Balance is based on the amount of revenue that is needed to provide working capital for month-to-month O&M expenditures. With sufficient working capital, the City can operate without cash flow constraints and without borrowing from the General Fund. At a minimum, we recommend an operating reserve that is based on how frequently customers are billed. This frequency establishes the lag between when the City incurs expenses and when it receives revenue from billings. The City bills its customers monthly. We recommend that, at a minimum, the Operating Reserve equal 1.5 times the bill frequency (or six weeks in the City's case), which is the equivalent of 12.5% of one year's O&M expenditures, which is currently about \$300,000. The City's Operating Reserve should never drop below this minimum balance.

- **Target Balance.** The Target Balance is the Minimum Balance plus an additional cash margin for working capital to purchase collection vehicles and collection containers used by the residents and businesses. The fund balance needs to be sufficient to purchase collection vehicles without delays caused by cash flow limitations, thereby eliminating financing costs. In the City's case, the capital component of the Target Balance is set to 1.25 times the average annual PayGo expenditure, which is about \$700,000. This will provide adequate cash flow for the purchase of two or three collection vehicles per year during the planning period (which reflects replacing vehicles after 8-10 year in use, which is the typical useful life of a collection vehicle) and \$15,000 per year for container purchases. Therefore, the Target Balance is currently about \$1,000,000.

Figure 4-3 shows the combined fund balance for the operating and capital replacement reserves compared with the target balances. The line labeled "Minimum Balance" represents the operating reserve target balance. The line labeled "Target Balance" (diamond symbols) is the sum of the target balances for the operating reserve in the capital replacement reserve.

Figure 4-3 indicates that the fund balance is above the target in FY 2011-12. The combined fund balance drops considerably by FY 2013-14 due to one-time payments to fund accumulating unfunded liabilities (the solid waste enterprises' proportionate share of unfunded other post-employment benefits (OPEB) and corporation yard construction expenses. The reserves had previously been accumulated to accommodate these one-time payments.

With the projected revenue increases, the fund balance will drop to its lowest point in FY 2014-15, approximately 25% below the target balance (but still significantly above the minimum balance) and will be just below the target balance by the end of the planning period, FY 2017-18. In this way, a combination of revenue increases and the use of the current reserve funds cover the increased operating and capital costs that are projected.

Figure 4-3. Solid Waste Fund Balance With and Without Rate Increases

4.3 COST OF SERVICE ANALYSIS

The City's current solid waste rates determine how much of the total revenue requirement is paid by each customer class (e.g., residential and commercial customers). A cost of service analysis determines how much each class should pay based on its respective share of the route labor costs, route vehicle costs, administrative costs, and disposal/processing costs at the WPWMA MRF.

A cost-of-service analysis is a rate-making methodology that apportions the cost of service to the classes of customers in proportion to the benefits received. The methodology first requires the identification of costs by service or function provided (i.e., collection, disposal/processing, billing, etc.). The units of service associated with each function are then determined. Each class is then allocated its share of the services based on the percentage of that service/expense that it requires. This cost-of-service methodology was used in allocating the City's cost of service to its residential and commercial customers.

Figure 4-4 summarizes the proportionate costs and revenues at current rates for each of the City's customer classes (residential and commercial). The overall revenue shortfall for FY 2013-14, based current rates and current customer service levels, is 7.0% (before the recommended 6.0% rate increase and use of reserve funds). Our cost of service

4. Solid Waste Rates

analysis found both customer classes are generating the same 7.0% shortfall; therefore, the City's current rate structure properly apportions the cost of service to each customer class for the benefits received.

Figure 4-4. Solid Waste Cost of Service Analysis

| | Budgeted FY 2013-14 | Allocation Method | Allocation Percentages | | Allocated Expenses | | Total |
|---|------------------------|----------------------|------------------------|------------|---------------------------------------|-------------------|--------------------|
| | | | Residential | Commercial | Residential | Commercial | |
| Salaries and Benefits - Operations | \$1,011,011 | Route Labor | 71 2% | 28 8% | \$719,656 | \$291,355 | \$1,011,011 |
| Salaries and Benefits - Administrative | \$342,752 | Accounts | 98 1% | 1 9% | \$336,231 | \$6,521 | \$342,752 |
| Operating Costs | | | | | | | |
| 50101 Office Expense | 674 | Accounts | 98 1% | 1 9% | \$661 | \$13 | 674 |
| 50111 Insurance | 21,267 | Routes | 82 4% | 17 6% | \$17,529 | \$3,739 | 21,267 |
| 50140 Materials / Supplies | 71,572 | Routes | 82 4% | 17 6% | \$58,990 | \$12,582 | 71,572 |
| 50150 Fuel & Oil | 192,080 | Routes | 82 4% | 17 6% | \$158,314 | \$33,766 | 192,080 |
| 50190 Clothing | 9,570 | Routes | 82 4% | 17 6% | \$7,887 | \$1,682 | 9,570 |
| 50220 Advertising | 15,150 | Accounts | 98 1% | 1 9% | \$14,862 | \$288 | 15,150 |
| 50250 Communications | 6,606 | Routes | 82 4% | 17 6% | \$5,445 | \$1,161 | 6,606 |
| 50270 Equipment Maintenance | 51,500 | Routes | 82 4% | 17 6% | \$42,447 | \$9,053 | 51,500 |
| 50320 Taxes | 103 | Routes | 82 4% | 17 6% | \$85 | \$18 | 103 |
| 50350 Lease Expense | 100,000 | Accounts | 98 1% | 1 9% | \$98,097 | \$1,903 | 100,000 |
| 50400 Professional Services | 236,008 | Accounts | 98 1% | 1 9% | \$231,518 | \$4,490 | 236,008 |
| 50500 Membership / Dues | 657 | Accounts | 98 1% | 1 9% | \$644 | \$12 | 657 |
| 50540 Training | 4,893 | Routes | 82 4% | 17 6% | \$4,032 | \$860 | 4,893 |
| 50710 Regulatory Fees | 22,454 | Routes | 82 4% | 17 6% | \$18,507 | \$3,947 | 22,454 |
| 57305 Disposal Fees | 1,587,907 | Tonnage | 76 0% | 24 0% | \$1,207,372 | \$380,535 | 1,587,907 |
| 60000 Depreciation | 33,987 | Routes | 82 4% | 17 6% | \$28,012 | \$5,975 | 33,987 |
| 80050 Equipment | 5,150 | Routes | 82 4% | 17 6% | \$4,245 | \$905 | 5,150 |
| Subtotal, Operating Costs | \$2,359,577 | | | | \$1,898,648 | \$460,929 | \$2,359,577 |
| Non-Operating Costs | | | | | | | |
| 65100 Cost Allocation - General Fund | 430,814 | Accounts | 98 1% | 1 9% | \$422,617 | \$8,197 | 430,814 |
| 65610 Cost Allocation - Fleet | 250,983 | Routes | 82 4% | 17 6% | \$206,862 | \$44,120 | 250,983 |
| Subtotal, Non-Operating | \$681,796 | | | | \$629,479 | \$52,317 | \$681,796 |
| Total Op and Non-Op Expens | \$4,395,136 | | | | \$3,584,014 | \$811,122 | \$4,395,136 |
| Transfers To/(From) Reserves | | | | | | | |
| Capital Replacement Fund (721) | 194,046 | Routes | 82 4% | 17 6% | \$159,935 | \$34,111 | 194,046 |
| Corp Yard/City Hall Bond Pmt | 159,713 | Accounts | 98 1% | 1 9% | \$156,674 | \$3,039 | 159,713 |
| OPEB Fund | 214,376 | Route Labor | 71 2% | 28 8% | \$152,596 | \$61,779 | 214,376 |
| Landfill Maintenance Costs | 126,179 | Tonnage | 76 0% | 24 0% | \$95,941 | \$30,238 | 126,179 |
| Total Transfers | 694,314 | | | | 565,146 | \$129,167 | 694,314 |
| Net Revenue Requirement | \$5,089,450 | | | | Allocated Expenses \$4,149,161 | \$940,290 | \$5,089,450 |
| Annual Revenue at Current Rates | | | | | \$3,898,899 | \$882,974 | |
| Less Bad Debt | | | | | (\$19,494) | (\$4,415) | |
| Net Revenue | | | | | \$3,879,405 | \$878,559 | \$4,757,964 |
| \$ Surplus/(Shortfall) | | | | | (\$269,756) | (\$61,730) | (\$331,486) |
| % Surplus/(Shortfall) | | | | | -7 0% | -7 0% | -7 0% |

4.4 RATE DESIGN AND PROJECTED RATE INCREASES

The rate design derives rates that will generate the appropriate amount of revenue (i.e., each customer classes' proportionate share of the revenue requirement) for each customer class. As shown in Section 4.3, the City's current rate structure is consistent with industry standards and satisfies the legal rate-making objectives; therefore, the

City should apply the following recommended rate increases across-the-board, without rate structure changes, to all existing solid waste rates:

- FY 2013-14 (effective 1/1/14): 6.0%
- FY 2014-15 (effective 7/1/15): 6.0%
- FY 2015-16 (effective 7/1/15): 5.0%
- FY 2016-17 (effective 7/1/15): 5.0%
- FY 2017-18 (effective 7/1/15): 5.0%

With these increases, rates should cover ongoing contractual and operating cost increases and to maintain adequate reserves through FY2017-18. Each year, prior to implementing the rate increases, City staff should confirm the need for the rate increase. The City can implement a lower rate increase, if conditions warrant, without going through the Proposition 218 notification process. If higher rate increases are needed that exceed the adopted rates, the City will need to initiate a new Proposition 218 proceeding.

The recommended annual increases and corresponding residential and commercial solid waste rates are summarized in **Figure 4-5**.

Figure 4-5. Solid Waste Monthly Rates - Current and Projected

| Customer Class | Current | Planning Period | | | | |
|--------------------------------|---------|-----------------|-------------|-------------|-------------|-------------|
| | | FY 2013-14 | FY 2014-15 | FY 2015-16 | FY 2016-17 | FY 2017-18 |
| | | eff 1/1/14 | eff 7/1/14 | eff 7/1/15 | eff 7/1/16 | eff 7/1/17 |
| Rate Increase | | 6.0% | 6.0% | 5.0% | 5.0% | 5.0% |
| Residential¹ | \$19.98 | \$21.18 | \$22.45 | \$23.57 | \$24.75 | \$26.00 |
| Commercial² | | | | | | |
| 90 gal Can, 1x/wk | \$24.01 | \$25.45 | \$26.98 | \$28.33 | \$29.74 | \$31.23 |
| 90 gal Can, 2x/wk | \$46.26 | \$49.04 | \$51.98 | \$54.52 | \$57.31 | \$60.17 |
| 90 gal Can, 3x/wk | \$68.51 | \$72.62 | \$76.98 | \$80.83 | \$84.87 | \$89.11 |
| 90 gal Can, 4x/wk | \$90.76 | \$96.21 | \$101.98 | \$107.08 | \$112.43 | \$118.05 |
| 3-yard Bin Pickup ³ | \$26.17 | \$27.74 | \$29.40 | \$30.87 | \$32.42 | \$34.04 |
| 4-yard Bin Pickup ³ | \$34.17 | \$36.22 | \$38.39 | \$40.31 | \$42.33 | \$44.45 |
| 5-yard Bin Pickup ³ | \$42.17 | \$44.70 | \$47.38 | \$49.75 | \$52.24 | \$54.85 |
| 3-yard Bin Monthly Lease | \$21.17 | \$22.44 | \$23.79 | \$24.98 | \$26.22 | \$27.54 |
| 4-yard Bin Monthly Lease | \$27.19 | \$28.82 | \$30.55 | \$32.08 | \$33.68 | \$35.37 |
| 5-yard Bin Monthly Lease | \$34.17 | \$36.22 | \$38.39 | \$40.31 | \$42.33 | \$44.45 |

¹Rate provides for weekly collection of one 90-gal solid waste container and one green waste container

²Rate provides for solid waste collection, commercial rate also applies to multi-family complexes sharing containers

³Rate provides for collection one-time per week, Rate for multiple collections per week is the stated rate times the number of regularly scheduled collections per week

4.5 COMPARISON OF PROPOSED CHARGES WITH NEIGHBORING AGENCIES

Figure 4-6 compares the current and proposed rate for the City's residential customers to some of the City's neighboring agencies. As shown in the figure, some agencies have multiple residential rates based on the size of collection container (e.g., 90-gallon, 60-

gallon). The City's proposed rate, effective 1/1/14, remains the lowest for 90-gallon service when compared to the neighboring agencies. **Note:** Figure 4-5 reflects other agencies' current rates. These rates may change during the forthcoming year.

Figure 4-6. Solid Waste Residential Rate Comparison
(\$/month)

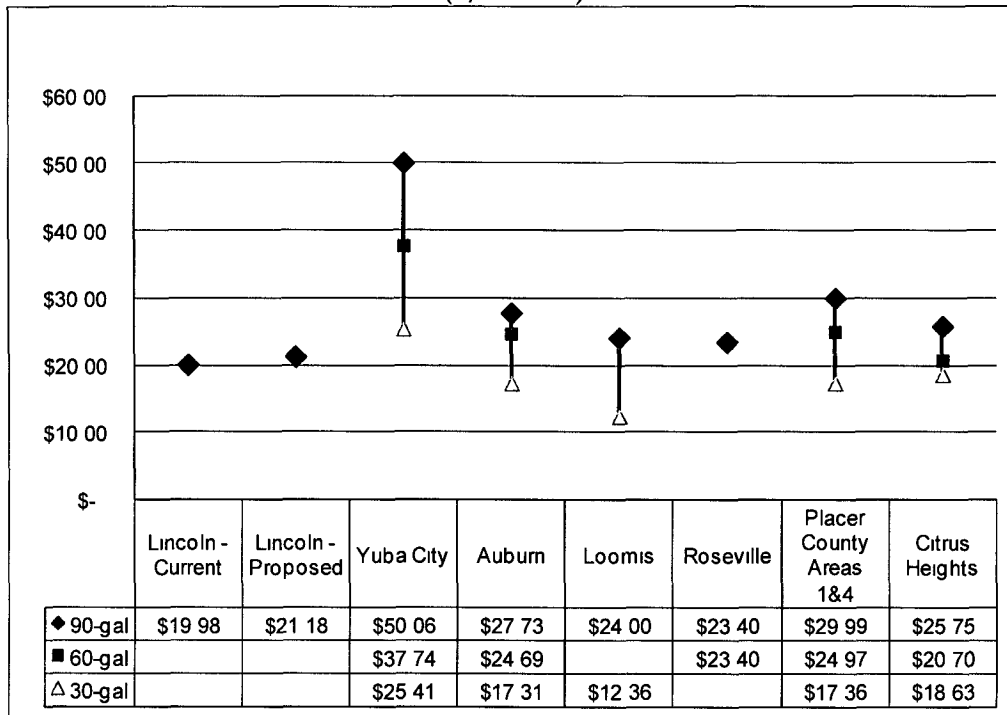
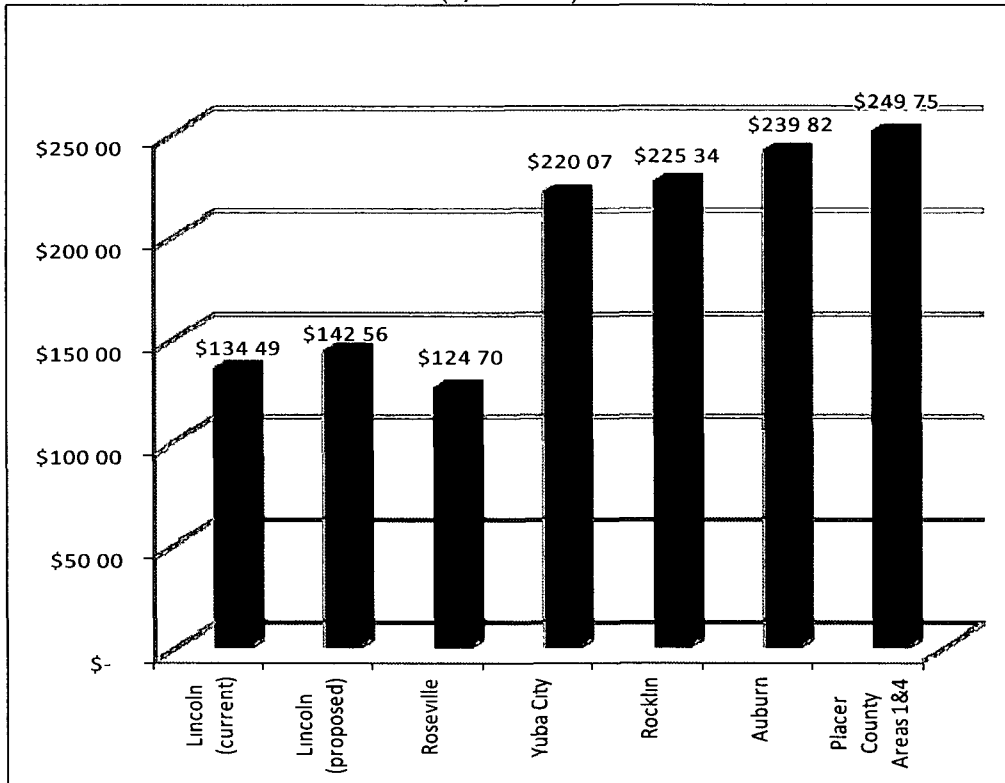


Figure 4-7 compares the City's current and proposed commercial rate (for the most common commercial service level, 3 cubic yards – 1x/week) to some of the City's neighboring agencies. The City's proposed rate remains much less than most of the neighboring agencies and is slightly higher than the rate changed in Roseville. **Note:** Figure 4-6 reflects other agencies' current rates. These rates may change during the forthcoming year.

Figure 4-7. Solid Waste Commercial Rate Comparison (3 CY – 1x/wk)
(\$/month)



APPENDIX A. WATER RATE MODEL

| | A | B | C | D | E | F | G | H | I | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|--|---|---|---|---|---|---|---|---|--|--------------|--------------|--------------|--------------|--------------|--------------|------------|----------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------------------|-----------|-----------|-----------|-----------|-----------|-----------|---------------------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------------|---------|-----------|-----------|-----------|-----------|-----------|--------------------|---------|---------|---------|---------|---------|---------|---------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 52 | <div>Expenditure Projections</div> <div>Projected Annual Expenses (in millions)</div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 53 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 54 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 55 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 56 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 57 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 58 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 59 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 61 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 62 | <div>Projected</div> <table><tr><th>Expenditures</th><th>FY 2012-13</th><th>FY 2013-14</th><th>FY 2014-15</th><th>FY 2015-16</th><th>FY 2016-17</th><th>FY 2017-18</th></tr><tr><td>PCWA Purchased Water</td><td>\$ 6,564,093</td><td>\$ 6,824,255</td><td>\$ 7,362,733</td><td>\$ 7,698,535</td><td>\$ 8,004,677</td><td>\$ 8,454,006</td></tr><tr><td>Operations & Maintenance</td><td>1,671,241</td><td>1,741,954</td><td>1,816,292</td><td>1,928,473</td><td>2,050,049</td><td>2,181,894</td></tr><tr><td>Salaries & Benefits</td><td>1,278,924</td><td>1,286,826</td><td>1,313,415</td><td>1,374,412</td><td>1,439,165</td><td>1,507,959</td></tr><tr><td>Capital Replacement Fund</td><td>947,369</td><td>1,307,627</td><td>1,575,314</td><td>1,839,760</td><td>2,163,028</td><td>2,656,819</td></tr><tr><td>Other Expenditures</td><td>905,532</td><td>431,451</td><td>470,491</td><td>523,925</td><td>560,061</td><td>625,067</td></tr><tr><td>Total Revenue Requirement</td><td>\$11,367,158</td><td>\$11,592,113</td><td>\$12,538,245</td><td>\$13,365,105</td><td>\$14,216,978</td><td>\$15,425,745</td></tr></table> | | | | | | | | | | Expenditures | FY 2012-13 | FY 2013-14 | FY 2014-15 | FY 2015-16 | FY 2016-17 | FY 2017-18 | PCWA Purchased Water | \$ 6,564,093 | \$ 6,824,255 | \$ 7,362,733 | \$ 7,698,535 | \$ 8,004,677 | \$ 8,454,006 | Operations & Maintenance | 1,671,241 | 1,741,954 | 1,816,292 | 1,928,473 | 2,050,049 | 2,181,894 | Salaries & Benefits | 1,278,924 | 1,286,826 | 1,313,415 | 1,374,412 | 1,439,165 | 1,507,959 | Capital Replacement Fund | 947,369 | 1,307,627 | 1,575,314 | 1,839,760 | 2,163,028 | 2,656,819 | Other Expenditures | 905,532 | 431,451 | 470,491 | 523,925 | 560,061 | 625,067 | Total Revenue Requirement | \$11,367,158 | \$11,592,113 | \$12,538,245 | \$13,365,105 | \$14,216,978 | \$15,425,745 |
| Expenditures | | | | | | | | | | | FY 2012-13 | FY 2013-14 | FY 2014-15 | FY 2015-16 | FY 2016-17 | FY 2017-18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PCWA Purchased Water | | | | | | | | | | | \$ 6,564,093 | \$ 6,824,255 | \$ 7,362,733 | \$ 7,698,535 | \$ 8,004,677 | \$ 8,454,006 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Operations & Maintenance | | | | | | | | | | | 1,671,241 | 1,741,954 | 1,816,292 | 1,928,473 | 2,050,049 | 2,181,894 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Salaries & Benefits | | | | | | | | | | | 1,278,924 | 1,286,826 | 1,313,415 | 1,374,412 | 1,439,165 | 1,507,959 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capital Replacement Fund | | | | | | | | | | | 947,369 | 1,307,627 | 1,575,314 | 1,839,760 | 2,163,028 | 2,656,819 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other Expenditures | | | | | | | | | | | 905,532 | 431,451 | 470,491 | 523,925 | 560,061 | 625,067 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Revenue Requirement | | | | | | | | | | | \$11,367,158 | \$11,592,113 | \$12,538,245 | \$13,365,105 | \$14,216,978 | \$15,425,745 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 63 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 64 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 65 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 66 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 67 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 68 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 69 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 70 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 71 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 72 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 73 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 74 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 75 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 76 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 77 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 78 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 79 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 80 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 81 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 82 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 83 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 84 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 85 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 86 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 87 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 88 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 89 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 90 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 91 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 92 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 93 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | A | B | C | D | E | F | G | H | I |
|-----|--------------------------------|---------------|---------------|---------------|---------------|----------------|----------------|---|--------------|
| 94 | | | | | | | | | |
| 95 | | | | | | | | | |
| 96 | Expenditures | | | | | | | | |
| 97 | Revenue Requirement | FY 2012-13 | FY 2013-14 | FY 2014-15 | FY 2015-16 | FY 2016-17 | FY 2017-18 | | From Table 2 |
| 98 | Revenue from Current Rates | \$11,367,158 | \$11,592,113 | \$12,538,245 | \$13,365,105 | \$14,216,978 | \$15,425,745 | | From Table 3 |
| 99 | | \$8,863,547 | \$8,910,134 | \$8,956,722 | \$9,003,310 | \$9,049,898 | \$9,096,485 | | |
| 100 | Surplus/(Deficit) | (\$2,503,611) | (\$2,681,979) | (\$3,581,523) | (\$4,361,795) | (\$5,167,081) | (\$6,329,260) | | From Table 3 |
| 101 | | | | | | | | | |
| 102 | Fund Balance (before increase) | \$3,706,053 | \$1,258,439 | (\$2,141,160) | (\$6,611,166) | (\$12,118,926) | (\$18,855,856) | | From Table 4 |
| 103 | | | | | | | | | |
| 104 | Revenue Increase | 0.0% | 15.0% | 15.0% | 15.0% | 11.0% | 11.0% | | From Above |
| 105 | Revenue from Increases | \$0 | \$668,260 | \$2,759,790 | \$4,553,268 | \$6,237,935 | \$7,817,644 | | From Table 3 |
| 106 | | | | | | | | | |
| 107 | Fund Balance (after increase) | \$3,706,053 | \$1,928,370 | \$1,289,366 | \$1,373,914 | \$2,108,055 | \$3,196,465 | | From Table 4 |
| 108 | | | | | | | | | |

| | A | B | C | D | E | F | G | H | I | J |
|----|---|--|------------|--------|--------|--------|--------|--------|--|--------------|
| 1 | City of Lincoln | | | | | | | | | |
| 2 | Water Rate Study | | | | | | | | | |
| 3 | Table 1B General | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | a | Interest on Fund Balance | 0.25% | 0.25% | 0.25% | 0.50% | 1.00% | 1.00% | Estimate | To Table 4 |
| 8 | b | General Inflation | Per Budget | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | Per Public Works 5 Year Projections | To Table 2 |
| 9 | c | Labor/Benefit Increases | PW Budget | 0.62% | 2.07% | 4.64% | 4.71% | 4.78% | Per Public Works 5 Year Projections | To Table 2 |
| 10 | d | Increase in PCWA Commodity Rates- Tier 1 | Provided | 0.0% | 6.0% | 2.8% | 3.0% | 3.0% | New PCWA Rates effective 3/1/14 and 3/1/15, incr estimated after | From Table 6 |
| 11 | e | Increase in PCWA Commodity Rates- Tier 2 | Provided | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | New PCWA Rates effective 3/1/14 and 3/1/15, incr estimated after | From Table 6 |
| 12 | f | Increase in PCWA Service Charge | Provided | 0.0% | 11.3% | 4.4% | 3.0% | 3.0% | New PCWA Rates effective 3/1/14 and 3/1/15, incr estimated after | From Table 6 |
| 13 | g | Increase in PCWA Replace/Renewal | Provided | 0.0% | 13.5% | 5.0% | 3.0% | 3.0% | New PCWA Rates effective 3/1/14 and 3/1/15, incr estimated after | From Table 6 |
| 14 | h | Growth in EDU - During Year | 100 | 100 | 100 | 100 | 100 | 100 | Estimate - Per City | To Table 6 |
| 15 | i | Total EDU's (End of year) | 19,026 | 19,126 | 19,226 | 19,326 | 19,426 | 19,526 | Based upon June 2012 data | To Table 6 |
| 16 | j | % Growth in EDU's | 1% | 1% | 1% | 1% | 1% | 1% | Calculated | To Table 6 |
| 17 | k | Water Loss | 10% | 10% | 10% | 10% | 10% | 10% | Per Public Works Dept | To Table 6 |
| 18 | l | Construction Water | 3% | 3% | 3% | 3% | 3% | 3% | Per Public Works Dept | To Table 6 |
| 19 | m | Groundwater Production | 10% | 10% | 10% | 10% | 10% | 10% | Per Public Works Dept | To Table 6 |
| 20 | n | Recycled Water - % of total supply | 4% | 4% | 4% | 4% | 4% | 4% | Per Public Works Dept | To Table 7 |
| 21 | o | Construction Cost Inflation | Per Budget | 2.55% | 2.55% | 2.55% | 2.55% | 2.55% | ENR Construction Cost Index, SF, 5-yr average | To Table 5 |
| 22 | p | Bad Debt Expense | 1% | 1% | 1% | 1% | 1% | 1% | Estimate - Per City | To Table 3 |
| 23 | q | Incr in Utilities (due to GW Production) | Per Budget | 0% | 0% | 0% | 0% | 0% | Estimate - Per City | To Table 2 |
| 24 | | | | | | | | | | |
| 25 | | | | | | | | | | |
| 26 | Model Table Index | | | | | | | | | |
| 27 | Table 1A Summary | | | | | | | | | |
| 28 | Table 1B General | | | | | | | | | |
| 29 | Table 2 Revenue Requirements | | | | | | | | | |
| 30 | Table 3 Revenue Increases | | | | | | | | | |
| 31 | Table 4 Reserve Funds | | | | | | | | | |
| 32 | Table 5 Capital Improvement Program | | | | | | | | | |
| 33 | Table 6 - Pass-Through Expenses (Water Purchases) | | | | | | | | | |
| 34 | Table 7 Debt Service | | | | | | | | | |
| 35 | Table 8 - Current Rate Revenue FY 2011-12 | | | | | | | | | |
| 36 | Table 9 - Summary of Customer Consumption by Classification /Tier | | | | | | | | | |
| 37 | Table 10 - Water Consumption - 2012 | | | | | | | | | |
| 38 | Table 11 - Service Charge Transition | | | | | | | | | |
| 39 | Table 12 - Cost of Service Analysis | | | | | | | | | |

| | A | B | C | E | F | G | H | I | J | K |
|----|-------------------------------|---|---|---|---|---|---|---|---|---|
| 1 | City of Lincoln | | | | | | | | | |
| 2 | Water Rate Study | | | | | | | | | |
| 3 | Table 2. Revenue Requirements | | | | | | | | | |
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| 50 | | | | | | | | | | |
| 51 | | | | | | | | | | |

| | A | B | C | E | F | G | H | I | J | K |
|----|--|---|---|-----------------------------------|---------------|---------------|---------------|---------------|---------------|--|
| 1 | City of Lincoln | | | | | | | | | |
| 2 | Water Rate Study | | | | | | | | | |
| 3 | Table 2 Revenue Requirements | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 52 | Non-Operating Revenues | | | | | | | | | |
| 53 | | | b | (24,934) | (25,682) | (26,452) | (27,246) | (28,063) | (28,905) | |
| 54 | | | b | (56,329) | (58,019) | (59,759) | (61,552) | (63,399) | (65,301) | |
| 55 | | | b | 0 | 0 | 0 | 0 | 0 | 0 | |
| 56 | | | b | (1,849) | (1,849) | (1,849) | (1,849) | (1,849) | (1,849) | |
| 57 | | | b | (12,503) | (12,878) | (13,264) | (13,662) | (14,072) | (14,494) | |
| 58 | | | b | (1,812) | (1,866) | (1,922) | (1,980) | (2,039) | (2,101) | |
| 59 | | | b | (5,594) | (5,762) | (5,935) | (6,113) | (6,296) | (6,485) | |
| 60 | | | | (\$103,021) | (\$106,056) | (\$109,182) | (\$112,402) | (\$115,719) | (\$119,135) | |
| 61 | Transfers To/(From) Reserves | | | | | | | | | |
| 62 | | | | 500,000 | - | - | - | - | - | From Budget - One Time expense per City |
| 63 | | | | 161,324 | 161,324 | 161,324 | 161,324 | 161,324 | 161,324 | From Budget - Water's share of lease exp |
| 64 | | | | - | - | - | - | - | - | From Table 4 |
| 65 | | | | 947,369 | 1,307,627 | 1,575,314 | 1,839,760 | 2,163,028 | 2,656,819 | From Table 4 |
| 66 | | | | 182,533 | 219,953 | 265,043 | 319,377 | 384,849 | 463,743 | From Table 4 |
| 67 | | | | \$ 1,791,226 | \$ 1,688,904 | \$ 2,001,681 | \$ 2,320,461 | \$ 2,709,201 | \$ 3,281,886 | |
| 68 | | | | \$ 11,367,158 | \$ 11,592,113 | \$ 12,538,245 | \$ 13,365,105 | \$ 14,216,978 | \$ 15,425,745 | To Table 3 |
| 69 | | | | 28% | 2% | 8% | 7% | 6% | 9% | |
| 70 | | | | Annual Percentage Change | | 10% | 16% | 21% | 29% | |
| 71 | | | | Cummulative Increase | | 2% | 24% | 23% | 22% | |
| 72 | | | | Percent of S&B to total Rev Req't | | 27% | | | | |
| 73 | Source City of Lincoln Public Works 5 year Budget Projection Water Operations (FILE Utilities GL with HFH Summary - 8 x1s) | | | | | | | | | |
| 74 | | | | | | | | | | |

| A | B | C | D | E | F | G | H | I | J | K |
|----|---|---|---|---|---|---|---|---|---|---|
| 1 | City of Lincoln | | | | | | | | | |
| 2 | Water Rate Study | | | | | | | | | |
| 3 | Table 3 Revenue Increases | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | Without Rate Increases | | | | | | | | | |
| 9 | Revenue from Current Rates | | | | | | | | | |
| 10 | Bad Debt Expense | | | | | | | | | |
| 11 | Net Rate Revenue | | | | | | | | | |
| 12 | Net Revenue Requirements | | | | | | | | | |
| 13 | Surplus/(Deficit) before rate increase | | | | | | | | | |
| 14 | | | | | | | | | | |
| 15 | With Rate Increase | | | | | | | | | |
| 16 | Increase in Revenue from rates | | | | | | | | | |
| 17 | Cumulative Increase | | | | | | | | | |
| 18 | | | | | | | | | | |
| 19 | Net Rate Revenue (from current rates) | | | | | | | | | |
| 20 | Revenue from Rate Increases | | | | | | | | | |
| 21 | FY 12-13 (effective 7/1/12) | | | | | | | | | |
| 22 | FY 13-14 (effective 1/1/14) | | | | | | | | | |
| 23 | FY 14-15 (effective 7/1/14) | | | | | | | | | |
| 24 | FY 15-16 (effective 7/1/15) | | | | | | | | | |
| 25 | FY 16-17 (effective 7/1/16) | | | | | | | | | |
| 26 | FY 17-18 (effective 7/1/17) | | | | | | | | | |
| 27 | Subtotal - Revenue from Rate Increases | | | | | | | | | |
| 28 | Total Rate Revenue | | | | | | | | | |
| 29 | Net Revenue Requirements | | | | | | | | | |
| 30 | Transfer to/(from) Operating Fund | | | | | | | | | |
| 31 | | | | | | | | | | |
| 32 | | | | | | | | | | |

| | A | B | C | D | E | F | G | H | I | J |
|----|---|---|---|---|---|---|---|---|---|---|
| 1 | City of Lincoln | | | | | | | | | |
| 2 | Water Rate Study | | | | | | | | | |
| 3 | Table 4. Reserve Funds | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | Water Operations Fund (710) | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| 11 | | | | | | | | | | |
| 12 | Beginning Balance | | | | | | | | | |
| 13 | Surplus/(Deficit) | | | | | | | | | |
| 14 | Transfers (To)/From: | | | | | | | | | |
| 15 | Revenue Requirements | | | | | | | | | |
| 16 | Capital Improvement (711) | | | | | | | | | |
| 17 | OPEB Reserve | | | | | | | | | |
| 18 | | | | | | | | | | |
| 19 | | | | | | | | | | |
| 20 | | | | | | | | | | |
| 21 | | | | | | | | | | |
| 22 | | | | | | | | | | |
| 23 | | | | | | | | | | |
| 24 | Water Capital Replacement Fund (711) | | | | | | | | | |
| 25 | Beginning Balance | | | | | | | | | |
| 26 | Expenditures | | | | | | | | | |
| 27 | Water Well Improvements | | | | | | | | | |
| 28 | Materials / Supplies | | | | | | | | | |
| 29 | Professional Services | | | | | | | | | |
| 30 | Annual Depreciation | | | | | | | | | |
| 31 | | | | | | | | | | |
| 32 | Transfers (To)/From: | | | | | | | | | |
| 33 | Revenue Requirements | | | | | | | | | |
| 34 | Operations Fund 710 | | | | | | | | | |
| 35 | | | | | | | | | | |
| 36 | | | | | | | | | | |
| 37 | | | | | | | | | | |
| 38 | | | | | | | | | | |
| 39 | | | | | | | | | | |
| 40 | | | | | | | | | | |
| 41 | OPEB Trust | | | | | | | | | |
| 42 | Beginning Balance | | | | | | | | | |
| 43 | Transfers (To)/From: | | | | | | | | | |
| 44 | Operations Fund 710 | | | | | | | | | |
| 45 | Revenue Requirements | | | | | | | | | |
| 46 | | | | | | | | | | |
| 47 | | | | | | | | | | |
| 48 | | | | | | | | | | |
| 49 | | | | | | | | | | |

Table 1b
factor

Projected

FY 2011-12 FY 2012-13 FY 2013-14 FY 2014-15 FY 2015-16 FY 2016-17 FY 2017-18

Notes

From Table 1A
From Table 3

From Table 2
From Below
To Below

From Above
To Table 2

From Above
To Table 2

From Above
To Table 2

From Above
To Table 2

From Above
To Table 2

From Above
To Table 2

From Above
To Table 2

From Above
To Table 2

| | A | B | C | D | E | F | G | H | I | J |
|----|---|---|---|---|---|---|---|---|---|---|
| 1 | City of Lincoln | | | | | | | | | |
| 2 | Water Rate Study | | | | | | | | | |
| 3 | Table 5. Capital Improvement Program | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | Water Capital Replacement (711) | | | | | | | | | |
| 7 | 131 New Water Wells | | | | | | | | | |
| 8 | 134 Backflow Prevention Devices | | | | | | | | | |
| 9 | 135 Water Main Replacement | | | | | | | | | |
| 10 | 137 Water Valve Replacement | | | | | | | | | |
| 11 | 138 Fire Hydrant Replacement | | | | | | | | | |
| 12 | 140 Water Meter Replacement - Residential | | | | | | | | | |
| 13 | 147 Water Well Improvements | | | | | | | | | |
| 14 | 205 Water Service Line Replacement | | | | | | | | | |
| 15 | 306 Water Meter Replacement - Non-Residential | | | | | | | | | |
| 16 | 309 N Street Project | | | | | | | | | |
| 17 | Annual Depreciation | | | | | | | | | |
| 18 | Corporation Yard/City Hall Allocation | | | | | | | | | |
| 19 | Other Projects | | | | | | | | | |
| 20 | Total (711) - cash funded | | | | | | | | | |
| 21 | Construction Cost Inflation | | | | | | | | | |
| 22 | Inflated Total | | | | | | | | | |
| 23 | | | | | | | | | | |

| | A | B | C | D | E | F | G | H |
|----|---|---------------|---------------|---------------|------------------------------|---------------|---------------|--|
| 1 | City of Lincoln | | | | | | | |
| 2 | Water Rate Study | | | | | | | |
| 3 | Table 6 - Pass-Through Expenses (Water Purchases) | | | | | | | |
| 4 | | | | | Conversion Factor (Gall/AF) | 325 851.43 | | |
| 5 | | | | | Conversion Factor (Gall/HCF) | 748.05 | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | EDU | | | | | | | |
| 9 | Demand/EDU (#gals/day) | 393 17 | 393 17 | 393 17 | 393 17 | 393 17 | 393 17 | From Table 10 EDU w/consumption in 2011-12 |
| 10 | Projected Increase in EDU | 100 | 100 | 100 | 100 | 100 | 100 | From Table 1B Assumption m |
| 11 | Total Projected EDU | 19 026 | 19 026 | 19 026 | 19 026 | 19 026 | 19 026 | From Table 1B Assumption n |
| 12 | Average EDU during year | 18 976 | 19 076 | 19 176 | 19 276 | 19 376 | 19 476 | Projected EDU less 50% of annual growth |
| 13 | | | | | | | | |
| 14 | Demand | 2 723 145 501 | 2 737 496 351 | 2 751 847 200 | 2 766 198 050 | 2 780 548 900 | 2 794 899 750 | Row 9 * Row 12 * 365 |
| 15 | Gallons | 8 357 | 8 401 | 8 445 | 8 489 | 8 533 | 8 577 | |
| 16 | Acre-Feet | 3 640.316 | 3 659.500 | 3 678.684 | 3 697.869 | 3 717.053 | 3 736.237 | |
| 17 | HCF | | | | | | | |
| 18 | (Annual change - %) | | | | | | | |
| 19 | (Annual change - HCF) | | | | | | | |
| 20 | | | | | | | | |
| 21 | Construction Water | 3 0% | 3 0% | 3 0% | 3 0% | 3 0% | 3 0% | To Table 1B, Assumption q |
| 22 | Gallons | 93 901 569 | 93 901 569 | 93 901 569 | 93 901 569 | 93 901 569 | 93 901 569 | |
| 23 | Acre-Feet | 288 | 290 | 291 | 293 | 294 | 296 | |
| 24 | HCF | 125 528 | 126 190 | 126 851 | 127 513 | 128 174 | 128 836 | |
| 25 | (Annual change - %) | | | | | | | |
| 26 | | | | | | | | |
| 27 | | | | | | | | |
| 28 | Water Losses | | | | | | | |
| 29 | Gallons | 10 0% | 10 0% | 10 0% | 10 0% | 10 0% | 10 0% | From Table 1B Assumption p |
| 30 | Acre-Feet | 313 005 230 | 314 589 769 | 316 194 308 | 317 788 847 | 319 383 385 | 320 977 924 | |
| 31 | HCF | 961 | 966 | 971 | 976 | 981 | 986 | |
| 32 | (Annual change - %) | | | | | | | |
| 33 | | | | | | | | |
| 34 | | | | | | | | |
| 35 | Total Water Requirement (GAL) | 3 130 052 300 | 3 145 997 689 | 3 161 943 077 | 3 177 888 466 | 3 193 833 854 | 3 209 779 243 | |
| 36 | Total Water Requirement (AF) | 9 606 | 9 656 | 9 707 | 9 758 | 9 808 | 9 859 | |
| 37 | Total Water Requirement (HCF) | 4 184 271 | 4 206 322 | 4 228 373 | 4 250 424 | 4 272 475 | 4 294 526 | |
| 38 | (Annual change - %) | | | | | | | |
| 39 | (Annual change - HCF) | | | | | | | |
| 40 | | | | | | | | |
| 41 | Supply | | | | | | | |
| 42 | PCWA Wholesale Purchase | 2 681 844 978 | 2 705 558 012 | 2 719 271 046 | 2 732 984 081 | 2 746 697 115 | 2 760 410 149 | |
| 43 | Gallons | 8 261 | 8 304 | 8 348 | 8 392 | 8 435 | 8 479 | |
| 44 | Acre-Feet | 3 598 473 | 3 617 437 | 3 636 401 | 3 655 364 | 3 674 328 | 3 693 292 | To Below |
| 45 | (Annual change - %) | | | | | | | |
| 46 | | | | | | | | |
| 47 | Groundwater Production - % of Total | | | | | | | |
| 48 | Gallons | 10 0% | 10 0% | 10 0% | 10 0% | 10 0% | 10 0% | From Table 1B Assumption r |
| 49 | Acre-Feet | 313 005 230 | 314 589 769 | 316 194 308 | 317 788 847 | 319 383 385 | 320 977 924 | |
| 50 | HCF | 961 | 966 | 971 | 976 | 981 | 986 | |
| 51 | (Annual change - %) | | | | | | | |
| 52 | | | | | | | | |
| 53 | | | | | | | | |
| 54 | Recycled Water - % of Total | | | | | | | |
| 55 | Gallons | 4 0% | 4 0% | 4 0% | 4 0% | 4 0% | 4 0% | From Table 1B Assumption s |
| 56 | Acre-Feet | 125 202 092 | 125 839 908 | 126 477 723 | 127 115 539 | 127 753 354 | 128 391 170 | |
| 57 | HCF | 384 | 386 | 388 | 390 | 392 | 394 | |
| 58 | (Annual change - %) | | | | | | | |
| 59 | Total Supply | 3 130 052 300 | 3 145 997 689 | 3 161 943 077 | 3 177 888 466 | 3 193 833 854 | 3 209 779 243 | |
| 60 | Check | 0 | 0 | 0 | 0 | 0 | 0 | |
| 61 | | | | | | | | |
| 62 | Costs | | | | | | | |
| 63 | PCWA Rates/Unit (FY Average Rate) | | | | | | | |
| 64 | First 500 Units/month | \$1 11 | \$1 13 | \$1 19 | \$1 22 | \$1 26 | \$1 32 | Calculated from CY Rates below |
| 65 | Each Additional Unit/month | \$1 34 | \$1 34 | \$1 34 | \$1 34 | \$1 34 | \$1 34 | Calculated from CY Rates below |
| 66 | | | | | | | | |
| 67 | | | | | | | | |
| 68 | Purchased Water - PCWA | | | | | | | |
| 69 | HCF Purchased | 3 598 473 | 3 617 437 | 3 636 401 | 3 655 364 | 3 674 328 | 3 693 292 | From Above |
| 70 | FY Annual Cost | | | | | | | |
| 71 | First 4 25M HCF/month | \$3 994 305 | \$4 095 662 | \$4 319 074 | \$4 467 221 | \$4 625 108 | \$4 867 466 | |
| 72 | Remaining Units/month | | | | | | | |
| 73 | Total | \$3 994 305 | \$4 095 662 | \$4 319 074 | \$4 467 221 | \$4 625 108 | \$4 867 466 | |
| 74 | % change | | 2 5% | 5 5% | 3 4% | 3 5% | 5 2% | |

| | A | B | C | D | E | F | G | H |
|-----|--|-------------------------|---------------|---------------|------------------------------|---------------|---------------|---|
| 1 | City of Lincoln | | | | | | | |
| 2 | Water Rate Study | | | | | | | |
| 3 | Table 6 - Pass-Through Expenses (Water Purchases) | | | | Conversion Factor (Gall/AF) | 325.85143 | | |
| 4 | | | | | Conversion Factor (Gall/HCF) | 748.05 | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 75 | | Estimated FY 2012-13 | FY 2013-14 | FY 2014-15 | FY 2015-16 | FY 2016-17 | FY 2017-18 | Notes |
| 76 | PCWA Water Available (no of EDUs) | 18,926 | 19,025 | 19,124 | 19,224 | 19,323 | 19,423 | # of EDUs' worth of capacity Assumption o |
| 77 | Gall/Month/EDU | 35,000 | 35,000 | 35,000 | 35,000 | 35,000 | 35,000 | From City of Lincoln |
| 78 | Maximum PCWA Water Purchase/Year | 7,948,710,000 | 7,980,489,244 | 8,032,268,487 | 8,074,047,731 | 8,115,826,975 | 8,157,608,218 | |
| 79 | Excess Capacity | 5,256,865,022 | 5,284,931,232 | 5,312,987,441 | 5,341,063,650 | 5,369,129,860 | 5,397,196,069 | |
| 80 | Excess Capacity as % of PCWA Purchase | 195.29% | 195.34% | 195.38% | 195.43% | 195.48% | 195.52% | |
| 81 | | | | | | | | |
| 82 | Monthly Service Charge (8" + 18") | | | | | | | |
| 83 | FY Rate/Month | \$2,473 | \$2,566 | \$2,793 | \$2,902 | \$2,989 | \$3,130 | |
| 84 | Annual Cost | \$29,675 | \$30,793 | \$33,513 | \$34,827 | \$35,871 | \$37,557 | |
| 85 | % rate increase | | 3.77% | 8.83% | 3.92% | 3.00% | 4.70% | |
| 86 | | | | | | | | |
| 87 | Renewal and Replacement Surcharge | | | | | | | |
| 88 | Rate/EDU/FY - Total | \$119.64 | \$125.04 | \$138.12 | \$144.11 | \$148.43 | \$155.41 | |
| 89 | Annual Cost | \$2,264,247 | \$2,378,883 | \$2,641,469 | \$2,770,238 | \$2,868,172 | \$3,018,425 | |
| 90 | % rate increase | | 4.5% | 10.5% | 4.5% | 3.0% | 4.7% | |
| 91 | | | | | | | | |
| 92 | Average Monthly fixed rate costs/EDU | \$10.10 | \$10.55 | \$11.66 | \$12.16 | \$12.52 | \$13.11 | |
| 93 | % of total PCWA costs | 36.48% | 37.04% | 38.25% | 38.57% | 38.57% | 38.57% | |
| 94 | Average Rate PCWA rate increase/base rate customer | | 4.50% | 10.43% | 4.32% | 2.99% | 4.69% | |
| 95 | | | | | | | | |
| 96 | Average Monthly variable rate costs/EDU | \$17.59 | \$17.94 | \$18.82 | \$19.36 | \$19.95 | \$20.88 | |
| 97 | % of total PCWA costs | 63.52% | 62.96% | 61.75% | 61.43% | 61.43% | 61.43% | |
| 98 | Average Rate PCWA rate increase/base rate customer | | 2.00% | 4.91% | 2.89% | 3.00% | 4.70% | |
| 99 | | | | | | | | |
| 100 | Average Monthly total rate costs/EDU | \$27.69 | \$28.49 | \$30.48 | \$31.52 | \$32.47 | \$34.00 | |
| 101 | Average Rate PCWA rate increase/base rate customer | | 2.91% | 6.95% | 3.44% | 3.00% | 4.70% | |
| 102 | | | | | | | | |
| 103 | Total FY Payment to PCWA | \$6,288,227 | \$6,505,338 | \$6,994,056 | \$7,272,345 | \$7,529,152 | \$7,923,449 | To Below |
| 104 | % change | | 3.45% | 7.51% | 3.98% | 3.53% | 5.24% | |
| 105 | Cost/HCF | \$1.75 | \$1.80 | \$1.92 | \$1.99 | \$2.05 | \$2.15 | |
| 106 | Cost/Gallon | \$0.0023 | \$0.0024 | \$0.0026 | \$0.0027 | \$0.0027 | \$0.0029 | |
| 107 | % change | | 2.91% | 6.95% | 3.44% | 3.00% | 4.70% | |
| 108 | | | | | | | | |
| 109 | Purchased Water - Recycled | | | | | | | |
| 110 | Average Unit Cost (50% Potable Rate) | \$1.65 | \$1.90 | \$2.18 | \$2.51 | \$2.78 | \$3.09 | From Table 8 increased by rate increase % |
| 111 | % change | | 15.00% | 15.00% | 15.00% | 11.00% | 11.00% | |
| 112 | HCF Purchased | 167,371 | 168,253 | 169,135 | 170,017 | 170,899 | 171,781 | |
| 113 | Recycled water revenue in wastewater | \$275,865 | \$318,917 | \$368,677 | \$426,190 | \$475,525 | \$530,557 | |
| 114 | | | | | | | | |
| 115 | Cost Summary | | | | | | | |
| 116 | Purchased Water - PCWA | \$6,288,227 | \$6,505,338 | \$6,994,056 | \$7,272,345 | \$7,529,152 | \$7,923,449 | From Above |
| 117 | Purchased Water - Recycled | \$275,865 | \$318,917 | \$368,677 | \$426,190 | \$475,525 | \$530,557 | |
| 118 | Total Cost of Purchased Water | \$6,564,093 | \$6,824,255 | \$7,362,733 | \$7,698,535 | \$8,004,677 | \$8,454,006 | 2012-13 onward To Table 2 - Water Purchases |
| 119 | % change | | 3.95% | 7.89% | 4.56% | 3.98% | 5.61% | |
| 120 | | | | | | | | |
| 121 | | | | | | | | |
| 122 | PCWA Rate Conversion to Lincoln FY from PCWA Rate Year | | | | | | | |
| 123 | Effective March 1 of Calendar Year | | | | | | | |
| 124 | Usage Charge | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | |
| 125 | First 4 25M Units/month | \$1.11 | \$1.11 | \$1.18 | \$1.21 | \$1.25 | \$1.28 | PCWA Rates effective through 3/1/15 |
| 126 | % rate increase | | 0.0% | 6.0% | 2.6% | 3.0% | 3.0% | Projected % from Table 1B, Assumption t |
| 127 | Each Additional Unit/month | \$1.34 | \$1.34 | \$1.34 | \$1.34 | \$1.34 | \$1.34 | PCWA Rates effective 3/1/2012 |
| 128 | % rate increase | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | Projected % from Table 1B, Assumption u |
| 129 | | | | | | | | |
| 130 | Monthly Service Charge (8" + 18") | | | | | | | |
| 131 | 8" line | \$688.66 | \$688.66 | \$765.48 | \$800.20 | \$824.21 | \$848.93 | PCWA Rates effective through 3/1/15 |
| 132 | 18" line | \$1,784.28 | \$1,784.28 | \$1,985.91 | \$2,073.27 | \$2,135.47 | \$2,199.54 | PCWA Rates effective through 3/1/15 |
| 133 | Total | \$2,472.94 | \$2,472.94 | \$2,752.39 | \$2,873.47 | \$2,959.68 | \$3,048.47 | |
| 134 | % Rate Increase | | 0.00% | 11.30% | 4.40% | 3.00% | 3.00% | Projected % from Table 1B, Assumption w |
| 135 | | | | | | | | |
| 136 | Renewal and Replacement Surcharge | | | | | | | |
| 137 | Rate/EDU/month- Total R&R Surcharge | \$9.97 | \$9.97 | \$11.32 | \$11.69 | \$12.25 | \$12.61 | PCWA Rates effective through 3/1/15 |
| 138 | % Rate Increase | | 0.00% | 13.54% | 3.20% | 3.00% | 3.00% | Projected % from Table 1B, Assumption y |
| 139 | | | | | | | | |

[illegible]

| | A | B | C | D | E | F | G | H | I | J | K |
|----|--|-------------------------|----------------------|----------------|-----------------|-------------------------|---------------------------------|----------------|-------------|---|---|
| 1 | City of Lincoln | | | | | | | | | | |
| 2 | Water Rate Study | | | | | | | | | | |
| 3 | Table 8 - Current Rate Revenue FY 2011-12 | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | 6/30/2012 | Total | | | | | | | | |
| 7 | Customer Class | Accounts ¹ | Gallons ⁴ | Mo. Rate | Annual Rev. | Base Rate % Revenue | Tier Allocation ⁵ | % | Gallons | | |
| 8 | | | | | Accounts x Rate | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | Single-Family | 16,270 | 2,246,112,672 | \$22.90 | \$4,470,996 | 97.1% | 65.53% | 1,471,977,928 | | | |
| 12 | Multi-Family | 72 | 92,120,037 | \$22.90 | \$19,786 | 0.4% | 11.50% | 10,591,000 | | | |
| 13 | Commercial | 310 | 164,439,367 | \$22.90 | \$85,188 | 1.9% | 14.98% | 24,636,000 | | | |
| 14 | Industrial | 8 | 68,501,000 | \$22.90 | \$2,198 | 0.0% | 1.03% | 705,000 | | | |
| 15 | Irrigation | 87 | 141,283,000 | \$22.90 | \$23,908 | 0.5% | 6.05% | 8,549,000 | | | |
| 16 | Outside City ⁶ | 6 | 2,750,000 | \$34.35 | \$2,473 | 0.1% | 22.87% | 629,000 | | | |
| 17 | Irrigation - City | 81 | 764,000 | \$0.00 | \$0 | 0.0% | 25.65% | 196,000 | | | |
| 18 | TOTALS | 16,834 | 2,715,970,076 | \$22.79 | \$4,604,549 | 100.0% | 55.87% | 1,517,283,928 | | | |
| 19 | | | | | | | | | | | |
| 20 | 1 - From Table 10 | | | | | | | | | | |
| 21 | 4 - From Table 9 | | | | | | | | | | |
| 22 | 5 - Tier allocation percentages based on consumption data from Table 9 | | | | | | | | | | |
| 23 | 6 - By Ordinance No 801b Outside City rates are 150% of in-city rates | | | | | | | | | | |
| 24 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |
| 26 | Customer Class | % | Gallons | Rate/1,000 Gal | Revenue | % | Gallons | Rate/1,000 Gal | Revenue | | |
| 27 | Low volume Break | Tier | 11,000 | | | Tier | 21,000 | | | | |
| 28 | High Volume Break | Allocation ⁵ | 20,000 | | | Allocation ⁵ | 60,000 | | | | |
| 29 | | | | | | | | | | | |
| 30 | Single-Family | 22.37% | 502,343,800 | \$3.53 | \$1,773,274 | 10.45% | 234,652,944 | \$3.63 | \$851,790 | | |
| 31 | Multi-Family | 10.18% | 9,375,000 | \$3.53 | \$33,094 | 21.43% | 19,745,920 | \$3.63 | \$71,678 | | |
| 32 | Commercial | 9.35% | 15,382,000 | \$3.53 | \$54,298 | 21.36% | 35,120,303 | \$3.63 | \$127,487 | | |
| 33 | Industrial | 0.86% | 589,000 | \$3.53 | \$2,079 | 2.18% | 1,495,000 | \$3.63 | \$5,427 | | |
| 34 | Irrigation | 5.20% | 7,342,000 | \$3.53 | \$25,917 | 16.07% | 22,705,000 | \$3.63 | \$82,419 | | |
| 35 | Outside City ⁶ | 15.71% | 432,000 | \$5.30 | \$2,287 | 31.53% | 867,000 | \$5.45 | \$4,721 | | |
| 36 | Irrigation - City | 14.40% | 110,000 | \$0.00 | \$0 | 35.99% | 275,000 | \$0.00 | \$0 | | |
| 37 | TOTALS | | 535,573,800 | \$3.53 | \$1,890,950 | | 314,861,167 | \$3.63 | \$1,143,521 | | |
| 38 | | | | | | | | | | | |

| | A | B | C | D | E | F | G | H | I | J | K |
|----|---|-------------|-------------------|----------------|--------------|-----------------|----------------|----------------|---------------|-------------|--------------------|
| 1 | City of Lincoln | | | | | | | | | | |
| 2 | Water Rate Study | | | | | | | | | | |
| 3 | Table 8 - Current Rate Revenue FY 2011-12 | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 39 | | | | | | | | | | | |
| 40 | | | | | | | | | | | |
| 41 | Customer Class | | | | | | | | | | |
| 42 | Low volume Break | | | | | | | | | | |
| 43 | High Volume Break | | | | | | | | | | |
| 44 | | | | | | | | | | | |
| 45 | Single-Family | 1 31% | 29,334,000 | \$3 73 | \$109,416 | 0 35% | 7,804,000 | \$3 83 | \$29,889 | | |
| 46 | Multi-Family | 41 35% | 38,091,361 | \$3 73 | \$142,081 | 15 54% | 14,316,756 | \$3 83 | \$54,833 | | |
| 47 | Commercial | 38 64% | 63,534,764 | \$3 73 | \$236,985 | 15 67% | 25,766,300 | \$3 83 | \$98,685 | | |
| 48 | Industrial | 8 81% | 6,032,000 | \$3 73 | \$22,499 | 87 12% | 59,680,000 | \$3 83 | \$228,574 | | |
| 49 | Irrigation | 48 10% | 67,952,000 | \$3 73 | \$253,461 | 24 59% | 34,735,000 | \$3 83 | \$133,035 | | |
| 50 | Outside City ⁶ | 29 89% | 822,000 | \$5 60 | \$4,599 | 0 00% | - | \$5 75 | \$0 | | |
| 51 | Irrigation - City | 23 95% | 183,000 | \$0 00 | \$0 | 0 00% | - | \$0 00 | \$0 | | |
| 52 | TOTALS | | 205,949,125 | \$3 73 | \$769,041 | 5.24% | 142,302,056 | \$3 83 | \$545,017 | | |
| 53 | | | | | | | | | | | |
| 54 | | | | | | | | | | | |
| 55 | Customer Class | # Customers | Total Consumption | | | | | | | | |
| 56 | | | Gallons | % of Total Gal | Base Rate \$ | % of Class Rev. | Consumption \$ | % of Class Rev | Class Revenue | % Total Rev | Avg Cost per 1,000 |
| 57 | Single-Family | 16,270 | 2,246,112,672 | 82 700% | \$4,470,996 | 61 794% | \$2,764,369 | 38 206% | \$7,235,365 | 80 814% | \$3 22 |
| 58 | Multi-Family | 72 | 92,120,037 | 3 392% | \$19,786 | 6 155% | \$301,685 | 93 845% | \$321,471 | 3 591% | \$3 49 |
| 59 | Commercial | 310 | 164,439,367 | 6 055% | \$85,188 | 14 136% | \$517,455 | 85 864% | \$602,643 | 6 731% | \$3 66 |
| 60 | Industrial | 8 | 68,501,000 | 2 522% | \$2,198 | 0 843% | \$258,580 | 99 157% | \$260,778 | 2 913% | \$3 81 |
| 61 | Irrigation | 87 | 141,283,000 | 5 202% | \$23,908 | 4 609% | \$494,832 | 95 391% | \$518,740 | 5 794% | \$3 67 |
| 62 | Outside City ⁶ | 6 | 2,750,000 | 0 101% | \$2,473 | 17 565% | \$11,607 | 82 435% | \$14,081 | 0 157% | \$5 12 |
| 63 | Irrigation - City | 81 | 764,000 | 0 028% | \$0 | #DIV/0! | \$0 | #DIV/0! | \$0 | 0 000% | \$0 00 |
| 64 | Total | 16,834 | 2,715,970,076 | 100 000% | \$4,604,549 | 51 430% | \$4,348,529 | 48 570% | \$ 8,953,077 | 100 000% | \$3 30 |
| 65 | | | | | | | | | | | |
| 66 | | | | | | | | | | | |
| 67 | | | | | | | | | | | |
| 68 | | | | | | | | | | | |

To Table 3
 12-13 Budgeted \$ 9,199,588
 Difference (\$) \$246,511
 Difference (%) 2 75%

| | A | B | C | D | E | F | G | H |
|----|---|---------------|-------------|-------------|------------|------------|---------------|------------|
| 1 | City of Lincoln | | | | | | | |
| 2 | Water Rate Study | | | | | | | |
| 3 | Table 9 - Summary of Customer Consumption by Classification /Tier | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | Residential Gallons | Base | Step 1 | Step 2 | Step 3 | Step 4 | Total | Notes |
| 8 | May-11 | 114,219,966 | 20,140,968 | 5,087,000 | 514,000 | - | 139,961,934 | |
| 9 | Jun-11 | 133,993,000 | 43,129,952 | 13,244,000 | 1,786,000 | - | 192,152,952 | |
| 10 | Jul-11 | 141,605,000 | 58,447,960 | 20,971,000 | 1,945,000 | 8,000 | 222,976,960 | |
| 11 | Aug-11 | 149,117,000 | 90,667,456 | 53,859,000 | 10,889,000 | 6,133,000 | 310,665,456 | |
| 12 | Sep-11 | 149,920,000 | 91,434,464 | 52,264,000 | 5,506,000 | 41,000 | 299,165,464 | |
| 13 | Oct-11 | 152,000,000 | 98,603,000 | 58,923,944 | 4,995,000 | 1,622,000 | 316,143,944 | |
| 14 | Nov-11 | 127,902,496 | 32,557,000 | 9,710,000 | 637,000 | - | 170,806,496 | |
| 15 | Dec-11 | 119,374,496 | 25,505,000 | 8,336,000 | 971,000 | - | 154,186,496 | |
| 16 | Jan-12 | 94,900,992 | 10,677,000 | 3,174,000 | 369,000 | - | 109,120,992 | |
| 17 | Feb-12 | 104,826,740 | 13,479,000 | 3,875,000 | 656,000 | - | 122,836,740 | |
| 18 | Mar-12 | 88,287,244 | 7,664,000 | 2,158,000 | 489,000 | - | 98,598,244 | |
| 19 | Apr-12 | 95,830,994 | 10,038,000 | 3,051,000 | 577,000 | - | 109,496,994 | |
| 20 | | 1,471,977,928 | 502,343,800 | 234,652,944 | 29,334,000 | 7,804,000 | 2,246,112,672 | To Table 8 |
| 21 | | 65.53% | 22.37% | 10.45% | 1.31% | 0.35% | 100.00% | To Table 8 |
| 22 | Multi-Family Gallons | | | | | | | |
| 23 | May-11 | 887,000 | 777,000 | 1,774,684 | 3,330,000 | 250,000 | 7,018,684 | |
| 24 | Jun-11 | 906,000 | 800,000 | 1,659,188 | 3,551,000 | 1,045,000 | 7,961,188 | |
| 25 | Jul-11 | 917,000 | 855,000 | 1,811,432 | 3,808,000 | 1,935,000 | 9,326,432 | |
| 26 | Aug-11 | 904,000 | 796,000 | 1,656,684 | 4,054,000 | 2,247,000 | 9,657,684 | |
| 27 | Sep-11 | 906,000 | 827,000 | 1,641,944 | 3,981,000 | 3,651,000 | 11,006,944 | |
| 28 | Oct-11 | 901,000 | 849,000 | 1,888,188 | 4,590,000 | 4,074,000 | 12,302,188 | |
| 29 | Nov-11 | 878,000 | 777,000 | 1,533,000 | 2,824,720 | 314,000 | 6,326,720 | |
| 30 | Dec-11 | 881,000 | 766,000 | 1,738,000 | 2,901,600 | 370,000 | 6,656,600 | |
| 31 | Jan-12 | 859,000 | 725,000 | 1,494,000 | 3,125,000 | 126,756 | 6,329,756 | |
| 32 | Feb-12 | 875,000 | 769,000 | 1,707,676 | 2,422,000 | 112,000 | 5,885,676 | |
| 33 | Mar-12 | 827,000 | 692,000 | 1,360,196 | 1,801,000 | - | 4,680,196 | |
| 34 | Apr-12 | 850,000 | 742,000 | 1,480,928 | 1,703,041 | 192,000 | 4,967,969 | |
| 35 | | 10,591,000 | 9,375,000 | 19,745,920 | 38,091,361 | 14,316,756 | 92,120,037 | To Table 8 |
| 36 | | 11.50% | 10.18% | 21.43% | 41.35% | 15.54% | 100.00% | To Table 8 |
| 37 | Commercial Gallons | | | | | | | |
| 38 | May-11 | 1,901,000 | 1,128,000 | 2,557,000 | 3,810,036 | 586,552 | 9,982,588 | |
| 39 | Jun-11 | 2,036,000 | 1,292,000 | 3,155,000 | 6,147,192 | 2,313,608 | 14,943,800 | |
| 40 | Jul-11 | 2,127,000 | 1,374,000 | 3,454,000 | 7,052,844 | 3,146,824 | 17,154,668 | |
| 41 | Aug-11 | 2,468,000 | 1,693,000 | 3,269,000 | 7,503,664 | 4,285,884 | 19,219,548 | |
| 42 | Sep-11 | 2,191,000 | 1,496,000 | 3,948,000 | 9,763,640 | 5,107,268 | 22,505,908 | |
| 43 | Oct-11 | 2,239,000 | 1,597,000 | 4,150,000 | 10,879,240 | 5,932,344 | 24,797,584 | |
| 44 | Nov-11 | 2,137,000 | 1,331,000 | 3,134,000 | 4,388,060 | 1,445,820 | 12,435,880 | |
| 45 | Dec-11 | 2,076,000 | 1,261,000 | 2,801,675 | 3,487,732 | 1,305,000 | 10,931,407 | |
| 46 | Jan-12 | 1,790,000 | 958,000 | 1,931,604 | 1,977,256 | 204,000 | 6,860,860 | |
| 47 | Feb-12 | 1,964,000 | 1,140,000 | 2,471,000 | 2,909,100 | 610,000 | 9,094,100 | |
| 48 | Mar-12 | 1,800,000 | 978,000 | 1,823,516 | 2,489,000 | 471,000 | 7,561,516 | |
| 49 | Apr-12 | 1,907,000 | 1,134,000 | 2,425,508 | 3,127,000 | 358,000 | 8,951,508 | |
| 50 | | 24,636,000 | 15,382,000 | 35,120,303 | 63,534,764 | 25,766,300 | 164,439,367 | To Table 8 |
| 51 | | 14.98% | 9.35% | 21.36% | 38.64% | 15.67% | 100.00% | To Table 8 |

| | A | B | C | D | E | F | G | H |
|----|---|-----------|-----------|------------|------------|------------|-------------|------------|
| 1 | City of Lincoln | | | | | | | |
| 2 | Water Rate Study | | | | | | | |
| 3 | Table 9 - Summary of Customer Consumption by Classification /Tier | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 52 | Industrial Gallons | | | | | | | |
| 53 | May-11 | 59,000 | 50,000 | 146,000 | 532,000 | 6,575,000 | 7,362,000 | |
| 54 | Jun-11 | 57,000 | 50,000 | 125,000 | 518,000 | 3,125,000 | 3,875,000 | |
| 55 | Jul-11 | 61,000 | 50,000 | 145,000 | 593,000 | 5,045,000 | 5,894,000 | |
| 56 | Aug-11 | 63,000 | 54,000 | 108,000 | 473,000 | 4,920,000 | 5,618,000 | |
| 57 | Sep-11 | 61,000 | 60,000 | 163,000 | 556,000 | 5,985,000 | 6,825,000 | |
| 58 | Oct-11 | 62,000 | 60,000 | 184,000 | 689,000 | 5,930,000 | 6,925,000 | |
| 59 | Nov-11 | 63,000 | 44,000 | 119,000 | 402,000 | 3,675,000 | 4,303,000 | |
| 60 | Dec-11 | 64,000 | 51,000 | 135,000 | 429,000 | 5,605,000 | 6,284,000 | |
| 61 | Jan-12 | 54,000 | 40,000 | 82,000 | 415,000 | 4,650,000 | 5,241,000 | |
| 62 | Feb-12 | 59,000 | 50,000 | 94,000 | 470,000 | 5,185,000 | 5,858,000 | |
| 63 | Mar-12 | 53,000 | 40,000 | 96,000 | 455,000 | 4,465,000 | 5,109,000 | |
| 64 | Apr-12 | 49,000 | 40,000 | 98,000 | 500,000 | 4,520,000 | 5,207,000 | |
| 65 | | 705,000 | 589,000 | 1,495,000 | 6,032,000 | 59,680,000 | 68,501,000 | |
| 66 | | 1 03% | 0 86% | 2 18% | 8 81% | 87 12% | 100 00% | To Table 8 |
| 67 | Irrigation Gallons | | | | | | | |
| 68 | May-11 | 692,000 | 579,000 | 1,575,000 | 2,844,000 | 181,000 | 5,871,000 | |
| 69 | Jun-11 | 770,000 | 695,000 | 2,375,000 | 8,121,000 | 2,865,000 | 14,826,000 | |
| 70 | Jul-11 | 801,000 | 736,000 | 2,456,000 | 8,838,000 | 3,558,000 | 16,389,000 | |
| 71 | Aug-11 | 820,000 | 652,000 | 1,816,000 | 6,166,000 | 3,895,000 | 13,349,000 | |
| 72 | Sep-11 | 814,000 | 773,000 | 2,698,000 | 11,499,000 | 9,608,000 | 25,392,000 | |
| 73 | Oct-11 | 811,000 | 774,000 | 2,762,000 | 11,452,143 | 10,329,000 | 26,128,143 | |
| 74 | Nov-11 | 797,000 | 720,000 | 2,358,000 | 6,878,857 | 2,058,000 | 12,811,857 | |
| 75 | Dec-11 | 737,000 | 618,000 | 1,955,000 | 4,773,000 | 1,253,000 | 9,336,000 | |
| 76 | Jan-12 | 545,000 | 422,000 | 1,177,000 | 2,127,000 | 116,000 | 4,387,000 | |
| 77 | Feb-12 | 636,000 | 495,000 | 1,350,000 | 2,055,000 | 173,000 | 4,709,000 | |
| 78 | Mar-12 | 489,000 | 379,000 | 914,000 | 1,284,000 | 524,000 | 3,590,000 | |
| 79 | Apr-12 | 637,000 | 499,000 | 1,269,000 | 1,914,000 | 175,000 | 4,494,000 | |
| 80 | | 8,549,000 | 7,342,000 | 22,705,000 | 67,952,000 | 34,735,000 | 141,283,000 | |
| 81 | | 6 05% | 5 20% | 16 07% | 48 10% | 24 59% | 100 00% | To Table 8 |
| 82 | Outside City Gallons | | | | | | | |
| 83 | May-11 | 49,000 | 25,000 | 20,000 | - | - | 94,000 | |
| 84 | Jun-11 | 55,000 | 28,000 | 40,000 | 109,000 | - | 232,000 | |
| 85 | Jul-11 | 52,000 | 50,000 | 105,000 | 13,000 | - | 220,000 | |
| 86 | Aug-11 | 57,000 | 50,000 | 123,000 | 116,000 | - | 346,000 | |
| 87 | Sep-11 | 55,000 | 48,000 | 104,000 | 200,000 | - | 407,000 | |
| 88 | Oct-11 | 59,000 | 50,000 | 145,000 | 261,000 | - | 515,000 | |
| 89 | Nov-11 | 50,000 | 40,000 | 73,000 | 19,000 | - | 182,000 | |
| 90 | Dec-11 | 49,000 | 30,000 | 70,000 | 21,000 | - | 170,000 | |
| 91 | Jan-12 | 48,000 | 21,000 | 52,000 | 52,000 | - | 173,000 | |
| 92 | Feb-12 | 54,000 | 36,000 | 85,000 | 31,000 | - | 206,000 | |
| 93 | Mar-12 | 51,000 | 30,000 | 25,000 | - | - | 106,000 | |
| 94 | Apr-12 | 50,000 | 24,000 | 25,000 | - | - | 99,000 | |
| 95 | | 629,000 | 432,000 | 867,000 | 822,000 | - | 2,750,000 | |
| 96 | | 22 87% | 15 71% | 31 53% | 29 89% | 0 00% | 100 00% | To Table 8 |

| | A | B | C | D | E | F | G | H |
|-----|--|---------------|-------------|-------------|-------------|-------------|---------------|------------|
| 1 | City of Lincoln | | | | | | | |
| 2 | Water Rate Study | | | | | | | |
| 3 | Table 9 - Summary of Customer Consumption by Classification / Tier | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 97 | Irrigation - City | Base | Step 1 | Step 2 | Step 3 | Step 4 | Total | Notes |
| 98 | May-11 | 29,000 | 20,000 | 50,000 | 28,000 | - | 127,000 | |
| 99 | Jun-11 | 31,000 | 30,000 | 87,000 | 104,000 | - | 252,000 | |
| 100 | Jul-11 | 27,000 | 20,000 | 60,000 | 51,000 | - | 158,000 | |
| 101 | Aug-11 | 32,000 | 13,000 | 26,000 | - | - | 71,000 | |
| 102 | Sep-11 | 20,000 | 10,000 | 26,000 | - | - | 56,000 | |
| 103 | Oct-11 | 20,000 | 11,000 | 26,000 | - | - | 57,000 | |
| 104 | Nov-11 | 15,000 | 6,000 | - | - | - | 21,000 | |
| 105 | Dec-11 | 7,000 | - | - | - | - | 7,000 | |
| 106 | Jan-12 | 5,000 | - | - | - | - | 5,000 | |
| 107 | Feb-12 | 2,000 | - | - | - | - | 2,000 | |
| 108 | Mar-12 | 4,000 | - | - | - | - | 4,000 | |
| 109 | Apr-12 | 4,000 | - | - | - | - | 4,000 | |
| 110 | | 196,000 | 110,000 | 275,000 | 183,000 | - | 764,000 | |
| 111 | | 25.65% | 14.40% | 35.99% | 23.95% | 0.00% | 100.00% | To Table 8 |
| 112 | Total | 1,517,283,928 | 535,573,800 | 314,861,167 | 205,949,125 | 142,302,056 | 2,715,970,076 | |
| 113 | | 55.87% | 19.72% | 11.59% | 7.58% | 5.24% | 100.00% | |
| 114 | Summary | | | | | | | % of Total |
| 115 | Consumption (1,000 gal) | | | | | | | |
| 116 | Single-Family | 1,471,978 | 502,344 | 234,653 | 29,334 | 7,804 | 2,246,113 | 82.7% |
| 117 | Multi-Family | 10,591 | 9,375 | 19,746 | 38,091 | 14,317 | 92,120 | 3.4% |
| 118 | Commercial | 24,636 | 15,382 | 35,120 | 63,535 | 25,766 | 164,439 | 6.1% |
| 119 | Industrial | 705 | 589 | 1,495 | 6,032 | 59,680 | 68,501 | 2.5% |
| 120 | Irrigation | 8,549 | 7,342 | 22,705 | 67,952 | 34,735 | 141,283 | 5.2% |
| 121 | Outside City | 629 | 432 | 867 | 822 | - | 2,750 | 0.1% |
| 122 | Other | 196 | 110 | 275 | 183 | - | 764 | 0.0% |
| 123 | Total | 1,517,284 | 535,574 | 314,861 | 205,949 | 142,302 | 2,715,970 | 100.0% |
| 124 | Percent of Total by Class | | | | | | | |
| 125 | Single-Family | 65.5% | 22.4% | 10.4% | 1.3% | 0.3% | 100.0% | |
| 126 | Multi-Family | 11.5% | 10.2% | 21.4% | 41.3% | 15.5% | 100.0% | |
| 127 | Commercial | 15.0% | 9.4% | 21.4% | 38.6% | 15.7% | 100.0% | |
| 128 | Industrial | 1.0% | 0.9% | 2.2% | 8.8% | 87.1% | 100.0% | |
| 129 | Irrigation | 6.1% | 5.2% | 16.1% | 48.1% | 24.6% | 100.0% | |
| 130 | Outside City | 22.9% | 15.7% | 31.5% | 29.9% | 0.0% | 100.0% | |
| 131 | Other | 25.7% | 14.4% | 36.0% | 24.0% | 0.0% | 100.0% | |
| 132 | Total | 55.9% | 19.7% | 11.6% | 7.6% | 5.2% | 100.0% | |
| 133 | | | | | | | | |
| 134 | Source City of Lincoln May 2011 - April 2012 Water Billing Data | | | | | | | |

| | A | B | C | D | E | F | G | H | I | J |
|----|--|---------------|--------------|-----------------------------|--------------------|-------------|----------------|-----------------|---------------|----------------|
| 1 | City of Lincoln | | | | | | | | | |
| 2 | Water Rate Study | | | Conversion Factor (Gal/AF) | 325,851 | | | | | |
| 3 | Table 10 - Water Consumption - 2012 | | | Conversion Factor (Gal/HCF) | 748.05 | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | Volume in Gallons | Residential | Multi-family | Commercial | Industrial | Irrigation | Outside Limits | Irrigation-City | Total | Notes |
| 8 | May-11 | 139,961,934 | 7,018,684 | 9,982,588 | 7,362,000 | 5,871,000 | 94,000 | 127,000 | 170,417,206 | From Table 9 |
| 9 | Jun-11 | 192,152,952 | 7,961,188 | 14,943,800 | 3,875,000 | 14,826,000 | 232,000 | 252,000 | 234,242,940 | |
| 10 | Jul-11 | 222,976,960 | 9,326,432 | 17,154,668 | 5,894,000 | 16,389,000 | 220,000 | 158,000 | 272,119,060 | |
| 11 | Aug-11 | 310,665,456 | 9,657,684 | 19,219,548 | 5,618,000 | 13,349,000 | 346,000 | 71,000 | 358,926,688 | |
| 12 | Sep-11 | 299,165,464 | 11,006,944 | 22,505,908 | 6,825,000 | 25,392,000 | 407,000 | 56,000 | 365,358,316 | |
| 13 | Oct-11 | 316,143,944 | 12,302,188 | 24,797,584 | 6,925,000 | 26,128,143 | 515,000 | 57,000 | 386,888,859 | |
| 14 | Nov-11 | 170,806,496 | 6,326,720 | 12,435,880 | 4,303,000 | 12,811,857 | 182,000 | 21,000 | 206,886,953 | |
| 15 | Dec-11 | 154,186,496 | 6,656,600 | 10,931,407 | 6,284,000 | 9,336,000 | 170,000 | 7,000 | 187,571,503 | |
| 16 | Jan-12 | 109,120,992 | 6,329,756 | 6,860,860 | 5,241,000 | 4,387,000 | 173,000 | 5,000 | 132,117,608 | |
| 17 | Feb-12 | 122,836,740 | 5,885,676 | 9,094,100 | 5,858,000 | 4,709,000 | 206,000 | 2,000 | 148,591,516 | |
| 18 | Mar-12 | 98,598,244 | 4,680,196 | 7,561,516 | 5,109,000 | 3,590,000 | 106,000 | 4,000 | 119,648,956 | |
| 19 | Apr-12 | 109,496,994 | 4,967,969 | 8,951,508 | 5,207,000 | 4,494,000 | 99,000 | 4,000 | 133,220,471 | |
| 20 | | 2,246,112,672 | 92,120,037 | 164,439,367 | 68,501,000 | 141,283,000 | 2,750,000 | 764,000 | 2,715,970,076 | |
| 21 | | | | | | | | | | |
| 22 | Water Accts w/consumption in 2012 | 16,270 | 72 | 310 | 8 | 87 | 6 | 81 | 16,834 | To Table 8 |
| 23 | Consumption/Account | 138,052 | 1,279,445 | 530,450 | 8,562,625 | 1,623,943 | 458,333 | 9,432 | 161,338 | |
| 24 | Consumption/Account/Day | 378 | 3,505 | 1,453 | 23,459 | 4,449 | 1,256 | 26 | 442 | |
| 25 | | | | | | | | | | |
| 26 | | | | | | | | | | |
| 27 | Water EDUs w/consumption in 2012 | 16,449 | 617 | 1,447 | 7 | 396 | 6 | 4 | 18,926 | To Table 8, 1B |
| 28 | Consumption/EDU | 136,554 | 149,303 | 113,642 | 9,785,857 | 356,775 | 458,333 | 191,000 | 143,508 | |
| 29 | Consumption/EDU/Day | 374.12 | 409.05 | 311.35 | 26,810.57 | 977.47 | 1,255.71 | 523.29 | 393.17 | To Tables 7, 8 |
| 30 | | | | | | | | | | |
| 31 | | | | | | | | | | |
| 32 | Customer Class | # Customers | Total (tgal) | % of Total | | | | | | |
| 33 | | | | | | | | | | |
| 34 | Single-Family | 16,270 | 2,246,113 | 71.8% | | | | | | |
| 35 | Multi-Family | 72 | 92,120 | 2.9% | | | | | | |
| 36 | Commercial | 310 | 164,439 | 5.3% | | | | | | |
| 37 | Industrial | 8 | 68,501 | 2.2% | | | | | | |
| 38 | Irrigation | 87 | 141,283 | 4.5% | | | | | | |
| 39 | Outside City ⁶ | 6 | 2,750 | 0.1% | | | | | | |
| 40 | Other | 81 | 764 | 0.0% | | | | | | |
| 41 | Subtotal | 16,834 | 2,715,970 | 86.8% | | | | | | |
| 42 | Water loss | | 414,082 | 13.2% | | | | | | |
| 43 | Total Purchased and Pumped | 16,834 | 3,130,052 | 100.0% | Col C from Table 7 | | | | | |
| 44 | | | | | | | | | | |
| 45 | | | | | | | | | | |
| 46 | Source City of Lincoln 12-months ended April 30, 2012 Water Billing Data. Meter counts as of 6-30-2012 | | | | | | | | | |

| | A | B | C | D | E | F | G | H | I |
|----|--------------------------------------|---|---|---|---|---|---|---|-------|
| 1 | City of Lincoln | | | | | | | | |
| 2 | Water Rate Study | | | | | | | | |
| 3 | Table 11 - Service Charge Transition | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | Service Charge Adjustment | | | | | | | | |
| 6 | | | | | | | | | |
| 7 | | | | | | | | | Notes |
| 8 | | | | | | | | | |
| 9 | | | | | | | | | |
| 10 | | | | | | | | | |
| 11 | | | | | | | | | |
| 12 | | | | | | | | | |
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| 37 | | | | | | | | | |
| 38 | | | | | | | | | |
| 39 | | | | | | | | | |
| 40 | | | | | | | | | |

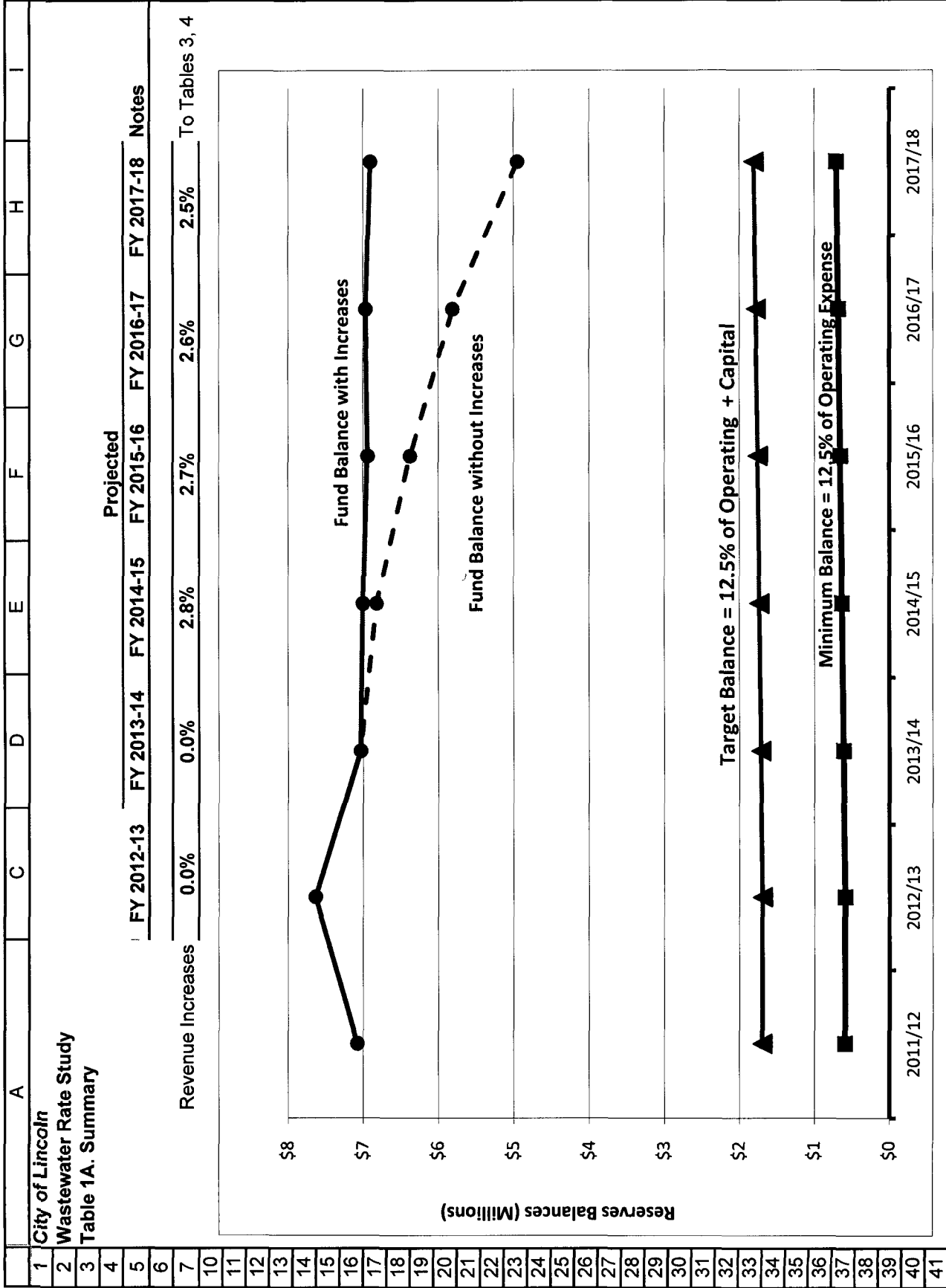
HF&H Ignored as part of calculation
HF&H Ignored as part of calculation

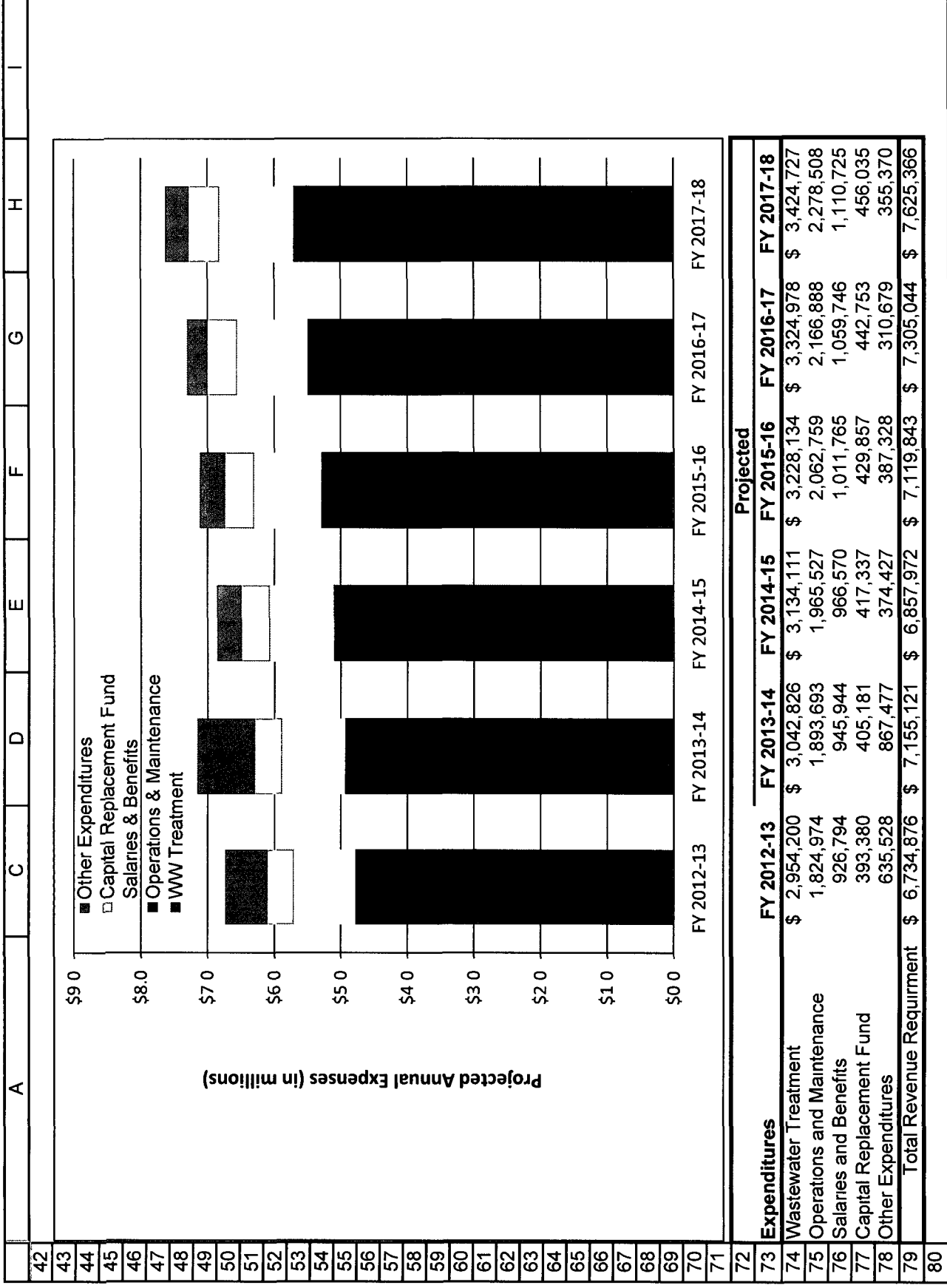
| | A | B | C | D | E | F | G | H | I |
|----|--|-------|------------|----------------|------------|-----|------------|----------------|---------------------------|
| 1 | City of Lincoln | | | | | | | | |
| 2 | Water Rate Study | | | | | | | | |
| 3 | Table 11 - Service Charge Transition | | | | | | | | |
| 41 | | | | | | | | | |
| 48 | Meter Counts, Adjusted Annual Revenue by Customer Class | | | | | | | | |
| 49 | | | | | | | | | |
| 50 | Residential | | | | Commercial | | | | |
| 51 | 5/8" | 0 | \$20 33 | \$0 00 | 5/8" | 15 | \$20 33 | Annual Revenue | |
| 52 | 3/4" | 16180 | \$20 33 | \$3,948,005 48 | 3/4" | 111 | \$20 33 | \$3,660 08 | |
| 53 | 1" | 89 | \$30 50 | \$32,574 71 | 1" | 61 | \$30 50 | \$27,084 59 | |
| 54 | 1 1/2" | 0 | \$101 67 | \$0 00 | 1 1/2" | 69 | \$101 67 | \$22,326 48 | |
| 55 | 2" | 1 | \$162 67 | \$1,952 04 | 2" | 37 | \$162 67 | \$84,181 82 | |
| 56 | 3" | 0 | \$325 34 | \$0 00 | 3" | 9 | \$325 34 | \$72,225 56 | |
| 57 | 2" - 3" | 0 | \$325 34 | \$0 00 | 2" - 3" | 4 | \$325 34 | \$35,136 76 | Treat as 3" per S Ambrose |
| 58 | 4" | 0 | \$813 35 | \$0 00 | 4" | 4 | \$508 34 | \$15,616 34 | |
| 59 | 8" | 0 | \$1,445 93 | \$0 00 | 8" | 0 | \$1,445 93 | \$24,400 53 | |
| 60 | | 16270 | | \$3,982,532 | | 310 | | \$284,632 16 | To Table 12 |
| 61 | | | | | | | | | |
| 62 | Irrigation | | | | Industrial | | | | |
| 63 | 5/8" | 0 | \$20 33 | \$0 00 | 5/8" | 0 | \$20 33 | \$0 00 | |
| 64 | 3/4" | 20 | \$20 33 | \$4,880 11 | 3/4" | 2 | \$20 33 | \$488 01 | |
| 65 | 1" | 23 | \$30 50 | \$8,418 18 | 1" | 0 | \$30 50 | \$0 00 | |
| 66 | 1 1/2" | 26 | \$101 67 | \$31,720 69 | 1 1/2" | 0 | \$101 67 | \$0 00 | |
| 67 | 2" | 10 | \$162 67 | \$19,520 42 | 2" | 3 | \$162 67 | \$5,856 13 | |
| 68 | 3" | 6 | \$325 34 | \$23,424 51 | 3" | 1 | \$325 34 | \$3,904 08 | |
| 69 | 4" | 1 | \$508 34 | \$6,100 13 | 4" | 1 | \$508 34 | \$6,100 13 | |
| 70 | 6" | 0 | \$813 35 | \$0 00 | 6" | 0 | \$813 35 | \$0 00 | |
| 71 | 8" | 1 | \$1,445 93 | \$17,351 22 | 8" | 1 | \$1,445 93 | \$17,351 22 | |
| 72 | | 87 | | \$111,415 25 | | 8 | | \$33,699 57 | To Table 12 |
| 73 | | | | | | | | | |
| 74 | Multi Family | | | | | | | | |
| 75 | 5/8" | 0 | \$20 33 | \$0 00 | | | | | |
| 76 | 3/4" | 12 | \$20 33 | \$2,928 06 | | | | | |
| 77 | 1" | 47 | \$30 50 | \$17,202 37 | | | | | |
| 78 | 1 1/2" | 0 | \$101 67 | \$0 00 | | | | | |
| 79 | 2" | 10 | \$162 67 | \$19,520 42 | | | | | |
| 80 | 3" | 2 | \$325 34 | \$7,808 17 | | | | | |
| 81 | 4" | 0 | \$508 34 | \$0 00 | | | | | |
| 82 | 6" | 1 | \$813 35 | \$9,760 21 | | | | | |
| 83 | 8" | 0 | \$1,445 93 | \$0 00 | | | | | |
| 84 | | 72 | | \$57,219 | | | | | To Table 12 |
| 85 | | | | | | | | | |
| 86 | Source Non-Residential meter count from 'Water - Non Residential Meter List from UB 2', Multi Family from Steve Ambrose, email dated 7/16/2013 | | | | | | | | |
| 87 | | | | | | | | | |

| | A | B | C | D | E | F | G | H |
|----|---|--------------|-----------------|----------------|----------------|---------------|--------------|-------------------------|
| 1 | City of Lincoln | | | | | | | |
| 2 | Water Rate Study | | | | | | | |
| 3 | Table 12 - Cost of Service Analysis | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | Customer Class | Base Rate \$ | % of Class Rev. | Consumption \$ | % of Class Rev | Class Revenue | % Total Rev. | Notes |
| 7 | Single-Family | \$4,470,996 | 61.794% | \$2,764,369 | 38.206% | \$7,235,365 | 80.9% | \$3,179,024.28 |
| 8 | Multi-Family | \$19,786 | 6.155% | \$301,685 | 93.845% | \$321,471 | 3.6% | \$346,938.20 |
| 9 | Commercial | \$85,188 | 14.136% | \$517,455 | 85.864% | \$602,643 | 6.7% | \$595,072.97 |
| 10 | Industrial | \$2,198 | 0.843% | \$258,580 | 99.157% | \$260,778 | 2.9% | \$297,366.75 |
| 11 | Irrigation | \$23,908 | 4.609% | \$494,832 | 95.391% | \$518,740 | 5.8% | \$569,057.28 |
| 12 | Total | \$4,602,076 | 51.483% | \$4,336,921 | 48.517% | \$ 8,938,997 | 100.0% | \$ 4,987,459 |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | Customer Class | Base Rate \$ | % of Class Rev. | Consumption \$ | % of Class Rev | Class Revenue | % Total Rev. | |
| 16 | Single-Family | \$3,982,532 | 52.056% | \$3,667,883 | 47.944% | \$7,650,415 | 85.6% | To Rate Design Analysis |
| 17 | Multi-Family | \$140,547 | 47.022% | \$158,349 | 52.978% | \$298,896 | 3.3% | |
| 18 | Commercial | \$284,632 | 50.174% | \$282,661 | 49.826% | \$567,293 | 6.3% | |
| 19 | Industrial | \$33,700 | 22.251% | \$117,749 | 77.749% | \$151,449 | 1.7% | |
| 20 | Irrigation | \$111,415 | 31.449% | \$242,857 | 68.551% | \$354,272 | 4.0% | |
| 21 | Total | \$4,469,498 | 50.000% | \$ 4,469,498 | 50.000% | \$ 8,938,997 | 100.0% | |
| 22 | | | | | | | | |
| 23 | Total Residential Water | | | 2,246,112,672 | | | | From Table 8, 10 |
| 24 | Total Non Residential Water | | | 466,343,404 | | | | |
| 25 | Total Water Sales | | | 2,712,456,076 | | | | |
| 26 | Avg Cost of Water (before conservation) | | | \$165 | | | | To Rate Design Analysis |
| 27 | Conservation (residential only) | | | 5% | | | | |
| 28 | Total Water Sales (after conservation) | | | 2,600,150,442 | | | | To Rate Design Analysis |
| 29 | Avg Cost of Water (with conservation) | | | \$172 | | | | |
| 30 | | | | | | | | |
| 31 | | | | | | | | |
| 32 | Customer Class | Base Rate \$ | % of Class Rev. | Consumption \$ | % of Class Rev | Class Revenue | % Total Rev. | |
| 33 | Single-Family | (\$488,464) | | \$903,514 | | \$415,050 | | |
| 34 | Multi-Family | \$120,761 | | (\$143,337) | | (\$22,575) | | |
| 35 | Commercial | \$199,444 | | (\$234,794) | | (\$35,349) | | |
| 36 | Industrial | \$31,501 | | (\$140,831) | | (\$109,330) | | |
| 37 | Irrigation | \$87,508 | | (\$251,976) | | (\$164,468) | | |
| 38 | Total | (\$49,249) | 0.000% | \$ 132,577 | 100.000% | \$ 83,328 | 100.000% | |
| 39 | | | | | | | | |

| | A | B | C | D | E | F | G | H |
|----|--|--------------------|-----------------|----------------|----------------|---------------|--------------|---|
| 1 | City of Lincoln | | | | | | | |
| 2 | Water Rate Study | | | | | | | |
| 3 | Table 12 - Cost of Service Analysis | | | | | | | |
| 4 | | | | | | | | |
| 40 | | | | | | | | |
| 41 | Customer Class | Base Rate | % of Class Rev. | Consumption | % of Class Rev | Class Revenue | % Total Rev. | |
| 42 | Single-Family | -11% | | 33% | | 6% | | |
| 43 | Multi-Family | 610% | | -48% | | -7% | | |
| 44 | Commercial | 234% | | -45% | | -6% | | |
| 45 | Industrial | 1433% | | -54% | | -42% | | |
| 46 | Irrigation | 366% | | -51% | | -32% | | |
| 47 | Total | -1% | | (2) | | -81% | | |
| 48 | | | | | | | | |
| 49 | | | | | | | | |
| 50 | Customer Class | Current Allocation | % of Class Rev. | COS Allocation | % of Class Rev | Difference | % Total Rev. | |
| 51 | Single-Family | \$7,235,365 | | \$7,650,415 | | \$415,050 | 5 7% | |
| 52 | Multi-Family | \$321,471 | | \$298,896 | | (\$22,575) | -7 0% | |
| 53 | Commercial | \$602,643 | | \$567,293 | | (\$35,349) | -5 9% | |
| 54 | Industrial | \$260,778 | | \$151,449 | | (\$109,330) | -41 9% | |
| 55 | Irrigation | \$518,740 | | \$354,272 | | (\$164,468) | -31 7% | |
| 56 | Total | \$8,938,997 | 0 000% | \$ 9,022,325 | 100 000% | \$ 83,328 | | |
| 57 | | | | | | | | |
| 58 | | | | | | | | |
| 59 | FY12-13 Total Revenue Requirement | \$ 8,938,997 | | | | | | |
| 60 | Service Charge Revenue - 50% | 4,469,498 | | | | | | |
| 61 | Consumption Charge Revenue | \$ 4,469,498 | a | | | | | |
| 62 | | | | | | | | |
| 63 | May 2011 - April 2012 Water Sales (in Tgals) | | | | | | | |
| 64 | Single-Family (with 5% reduction) | 2,133,807 | | | | | | |
| 65 | Multi-Family | 92,120 | | | | | | |
| 66 | Commercial | 164,439 | | | | | | |
| 67 | Industrial | 68,501 | | | | | | |
| 68 | Irrigation | 141,283 | | | | | | |
| 69 | | 2,600,150 | b | | | | | |
| 70 | | | | | | | | |
| 71 | FY 12-13 Cost of Service (\$/Tgal) | \$1 72 | a/b | | | | | |
| 72 | | | | | | | | |
| 73 | Cost of Service Reallocation | Consumption \$ | Base Rate \$ | Class Revenue | | | | |
| 74 | Single-Family | \$ 3,667,883 | \$ 3,982,532 | \$ 7,650,415 | | | | |
| 75 | Multi-Family | 158,349 | 140,547 | 298,896 | | | | |
| 76 | Commercial | 282,661 | 284,632 | 567,293 | | | | |
| 77 | Industrial | 117,749 | 33,700 | 151,449 | | | | |
| 78 | Irrigation | 242,857 | 111,415 | 354,272 | | | | |
| 79 | | \$ 4,469,498 | \$ 4,552,826 | \$ 9,022,325 | | | | |

APPENDIX B. WASTEWATER RATE MODEL





| | A | B | C | D | E | F | G | H | I | J |
|----|---|--|------------|--------|---------|---------|---------|---------|---|------------|
| 1 | | City of Lincoln | | | | | | | | |
| 2 | | Wastewater Rate Study | | | | | | | | |
| 3 | | Table 1B. General | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | a | Interest on Fund Balance | 0.25% | 0.25% | 0.25% | 0.50% | 1.00% | 1.00% | Estimate | To Table 4 |
| 8 | b | General Inflation | Per Budget | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | Per Public Works 5 Year Projections | To Table 2 |
| 9 | c | Labor/Benefit Increases | PW Budget | 1.54% | 2.07% | 4.59% | 4.66% | 4.73% | Per Public Works 5 Year Projections | To Table 2 |
| 10 | d | Growth in EDU - During Year | 100 | 100 | 100 | 100 | 100 | 100 | Estimate - Per City | To Table 6 |
| 11 | e | Total EDU's (End of year) | 19,026 | 19,126 | 19,226 | 19,326 | 19,426 | 19,526 | From City of Lincoln Water Model | To Table 6 |
| 12 | f | % Growth of Total EDU's | Per City | 0.5% | 0.5% | 0.5% | 0.5% | 0.5% | Calculated | To Table 6 |
| 13 | g | Construction Cost Inflation | Per Budget | 2.55% | 2.55% | 2.55% | 2.55% | 2.55% | ENR Construction Cost Index, SF, 5-yr average | To Table 5 |
| 14 | h | Bad Debt Expense | 1% | 1% | 1% | 1% | 1% | 1% | Estimate | To Table 3 |
| 15 | i | Volume Reclaimed Water (HCF) | - | - | 181,909 | 196,604 | 207,998 | 219,339 | PW Estimate of 4% of reclaimed water | To Table 4 |
| 16 | | | | | | | | | | |
| 17 | | Model Table Index | | | | | | | | |
| 18 | | Table 1A Summary | | | | | | | | |
| 19 | | Table 1B General | | | | | | | | |
| 20 | | Table 2 Revenue Requirement | | | | | | | | |
| 21 | | Table 3 Projected Revenue Increases | | | | | | | | |
| 22 | | Table 4 Reserves | | | | | | | | |
| 23 | | Table 5 Capital Improvements | | | | | | | | |
| 24 | | Table 6 Current Revenue | | | | | | | | |
| 25 | | Table 7 Capital Improvement Debt Service | | | | | | | | |
| 26 | | | | | | | | | | |

| | A | B | C | D | E | F | G | H | I | J | K |
|----|---------------------------------|-----------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|--------------|---|---|
| 1 | City of Lincoln | | | | | | | | | | |
| 2 | Wastewater Rate Study | | | | | | | | | | |
| 3 | Table 2. Revenue Requirement | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | Table 1B | | | | | | | | | | |
| | Factors | 2012/13 | 2013/14 | 2014/15 | 2015/16 | 2016/17 | 2017/18 | Notes | | | |
| 6 | Operating Expenses (6860) | | | | | | | | | | |
| 7 | Salaries and Benefits | | | | | | | | | | |
| 8 | 40000 | Full Time | 568,097 | 568,097 | 585,140 | 602,694 | 620,775 | | | | |
| 9 | 44000 | Overtime | 17,425 | 17,425 | 17,948 | 18,486 | 19,041 | | | | |
| 10 | 40500 | On-call | 17,958 | 17,958 | 18,497 | 19,052 | 19,623 | | | | |
| 11 | 40550 | Safety | \$0 | \$0 | \$0 | \$0 | \$0 | | | | |
| 12 | 48050 | Retirement | 79,888 | 85,480 | 91,464 | 110,672 | 121,739 | | | | |
| 13 | 48060 | Workers Comp | 21,280 | 21,280 | 21,918 | 22,576 | 23,253 | | | | |
| 14 | 48070 | Medical / Dental / Life Ins | 169,475 | 183,033 | 197,675 | 230,568 | 249,014 | | | | |
| 15 | 48070 | SUI | 4,098 | 4,098 | 4,221 | 4,347 | 4,478 | | | | |
| 16 | 48085 | SDI Employer | 2,962 | 2,962 | 2,962 | 2,962 | 2,962 | | | | |
| 17 | 48090 | FICA | 45,611 | 45,611 | 46,980 | 48,389 | 49,841 | | | | |
| 18 | 48095 | Def Comp | - | - | - | - | - | | | | |
| 19 | Subtotal, Salaries and Benefits | | | | | | | | | | |
| 20 | Operating Costs | | | | | | | | | | |
| 21 | 41000 | Contract Personnel | 5,523 | 5,689 | 5,859 | 6,035 | 6,216 | 6,403 | | | |
| 22 | 50101 | Office Expenses | 967 | 977 | 986 | 996 | 1,006 | 1,016 | | | |
| 23 | 50140 | Material/Supplies | 25,750 | 26,523 | 27,318 | 28,138 | 28,982 | 29,851 | | | |
| 24 | 50150 | Fuel and Oil | 33,000 | 35,970 | 39,207 | 42,736 | 46,582 | 50,775 | | | |
| 25 | 50190 | Uniforms and Clothing | 4,550 | 4,596 | 4,641 | 4,688 | 4,735 | 4,782 | | | |
| 26 | 50250 | Communications | 8,376 | 8,627 | 8,886 | 9,153 | 9,427 | 9,710 | | | |
| 27 | 50220 | Advertising | 7,000 | 7,070 | 7,141 | 7,212 | 7,284 | 7,357 | | | |
| 28 | 50270 | Equipment Maintenance | 30,000 | 30,900 | 31,827 | 32,782 | 33,765 | 34,778 | | | |
| 29 | 50280 | Building Maintenance | - | - | - | - | - | - | | | |
| 30 | 50310 | Utilities | 794,688 | 818,529 | 843,084 | 868,377 | 894,428 | 921,261 | | | |
| 31 | 50350 | Lease Expense | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | | | |
| 32 | 50400 | Professional Services | 200,101 | 206,104 | 212,287 | 218,656 | 225,215 | 231,972 | | | |
| 33 | 50400 | Professional Services - Treatment | 2,954,200 | 3,042,826 | 3,134,111 | 3,228,134 | 3,324,978 | 3,424,727 | WWTP Ops | | |
| 34 | 80050 | Equipment | 50,000 | 51,500 | 53,045 | 54,636 | 56,275 | 57,964 | | | |
| 35 | 80060 | Vehicles | - | - | - | - | - | - | | | |
| 36 | 50320 | Taxes | 6,400 | 6,400 | 6,400 | 6,400 | 6,400 | 6,400 | | | |
| 37 | 65100 | Cost Allocation - General Fund | 425,736 | 451,280 | 478,357 | 526,193 | 578,812 | 636,693 | | | |
| 38 | 65610 | Cost Allocation - Fleet | 90,372 | 94,891 | 99,635 | 107,606 | 116,214 | 125,512 | | | |
| 39 | Subtotal, Operating Costs | | | | | | | | | | |
| 40 | Debt Service | | | | | | | | | | |
| 41 | RRB 2000 Sewer System Sublease | | | | | | | | | | |
| | | | \$169,455 | \$150,207 | \$131,615 | \$113,737 | \$0 | \$0 | From Table 7 | | |

| A | B | C | D | E | F | G | H | I | J | K |
|----|--|---|---|-------------|-------------|-------------|-------------|-------------|-------------|--|
| 1 | City of Lincoln | | | | | | | | | |
| 2 | Wastewater Rate Study | | | | | | | | | |
| 3 | Table 2 Revenue Requirement | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 42 | Non-Operating Costs | | | | | | | | | |
| 43 | 50111 Insurance | | | 7,325 | 7,838 | 8,386 | 8,973 | 9,602 | 10,274 | |
| 44 | 50500 Membership/Dues/Subscriptions | | | 500 | 505 | 510 | 515 | 520 | 526 | |
| 45 | 50530 Travel/Conf/Mfg | | | - | - | - | - | - | - | |
| 46 | 50540 Training | | | 5,000 | 5,150 | 5,305 | 5,464 | 5,628 | 5,796 | |
| 47 | 50710 Regulatory Fees | | | 103,831 | 106,946 | 110,154 | 113,459 | 116,863 | 120,369 | |
| 48 | Subtotal, Non-Operating | | | 116,656 | 120,439 | 124,355 | 128,411 | 132,612 | 136,964 | |
| 49 | Total Op and Non-Op Expenses | | | \$5,949,568 | \$6,108,470 | \$6,275,326 | \$6,495,654 | \$6,632,680 | \$6,896,890 | |
| 50 | | | | 3% | 3% | 3% | 4% | 2% | 4% | |
| 51 | Non-Operating Revenue | | | | | | | | | |
| 52 | FOG Program | | | (200) | (206) | (212) | (219) | (225) | (232) | |
| 53 | Interfund Loan Interest | | | (18,990) | (18,990) | (18,990) | (18,990) | (18,990) | (18,990) | |
| 54 | Rents | | | (52,655) | (54,235) | (55,862) | (57,538) | (59,264) | (61,042) | |
| 55 | Misc Revenue | | | (2,300) | (2,369) | (2,440) | (2,513) | (2,589) | (2,666) | |
| 56 | | | | (\$74,145) | (\$75,800) | (\$77,504) | (\$79,259) | (\$81,067) | (\$82,930) | |
| 57 | Transfers To/(From) Reserves | | | | | | | | | |
| 58 | Operations (720) | | | - | - | - | - | - | - | From Table 4 |
| 59 | Capital Replacement Fund (721) | | | 393,380 | 405,181 | 417,337 | 429,857 | 442,753 | 456,035 | From Table 4 |
| 60 | Corp Yard/City Hall Bond Pmt (#915 & #970) | | | 92,673 | 92,673 | 92,673 | 92,673 | 92,673 | 92,673 | From Budget - Sewer's share of lease exp |
| 61 | Transfer Out | | | 270,000 | 500,000 | - | - | - | - | From Budget - One Time expense per City |
| 62 | Annual Depreciation | | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | From Table 4 |
| 63 | OPEB Fund | | | 103,400 | 124,597 | 150,139 | 180,918 | 218,006 | 262,697 | From Table 4 |
| 64 | Subtotal, Transfers | | | 859,453 | 1,122,451 | 660,149 | 703,448 | 753,431 | 811,405 | |
| 65 | | | | | | | | | | |
| 66 | Net Revenue Requirement | | | \$6,734,876 | \$7,155,121 | \$6,857,972 | \$7,119,843 | \$7,305,044 | \$7,625,366 | To Table 3 |
| 67 | Annual Increases | | | 6% | 6% | -4% | 4% | 3% | 4% | |

| | A | B | C | D | E | F | G | H | I | J | K |
|----|--------------------------------------|---|---|---|---|---|---|---|---|---|---|
| 1 | City of Lincoln | | | | | | | | | | |
| 2 | Wastewater Rate Study | | | | | | | | | | |
| 3 | Table 3. Projected Revenue Increases | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
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| 34 | | | | | | | | | | | |
| 35 | | | | | | | | | | | |
| 36 | | | | | | | | | | | |

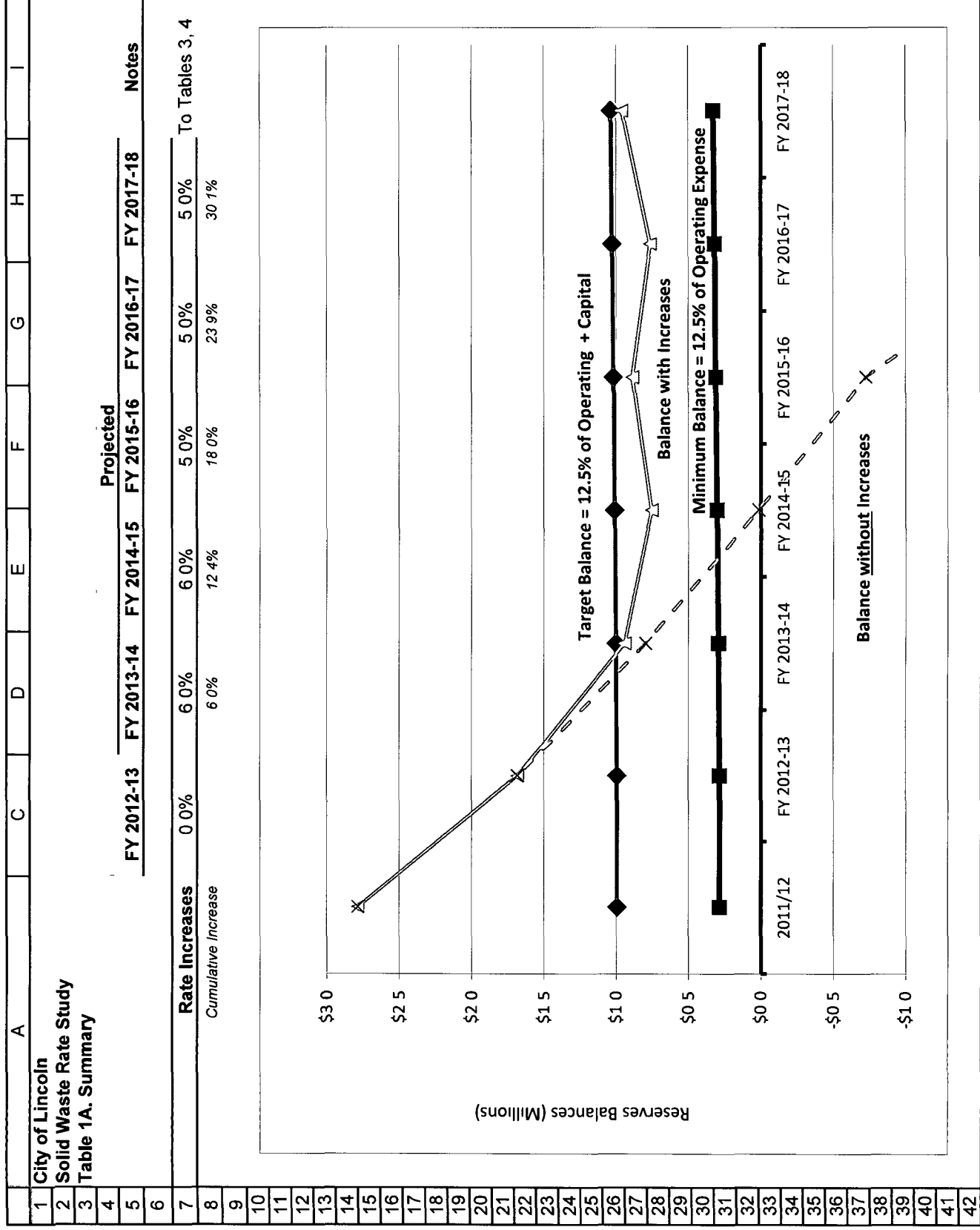
| | A | B | C | D | E | F | G | H | I | J |
|----|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----|-------------------------------|
| 1 | City of Lincoln | | | | | | | | | |
| 2 | Wastewater Rate Study | | | | | | | | | |
| 3 | Table 4 Reserves | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | Table 1B | | | | | | | | | |
| 7 | Factors | 2011/12 | 2012/13 | 2013/14 | 2014/15 | 2015/16 | 2016/17 | 2017/18 | | Notes |
| 8 | Wastewater Operations Fund (720) | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | Revenue Increases | | | | | | | | | |
| 11 | Cummulative Increase | | | | | | | | | |
| 12 | | 0.0% | 0.0% | 0.0% | 2.8% | 2.7% | 2.6% | 2.5% | | From Table 1a |
| 13 | | 0.0% | 0.0% | 0.5% | 3.6% | 7.0% | 10.3% | 13.7% | | From Table 3 |
| 14 | Beginning Balance | \$5,712,999 | \$6,054,626 | \$5,762,394 | \$6,236,665 | \$6,236,665 | \$6,702,517 | \$7,258,367 | | 2011/12 estimate from City |
| 15 | Surplus/(Deficit) | \$326,528 | (\$56,603) | \$458,719 | \$432,506 | \$432,506 | \$483,985 | \$401,361 | | From Table 3 |
| 16 | Revenue | | | | | | | | | |
| 17 | Reclaimed Water Revenue @ 50% avg water rate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | | |
| 18 | Transfer to/(from) | | | | | | | | | |
| 19 | Revenue Requirement | | | | | | | | | To Table 2 |
| 20 | Capital replacement (721) | | | | | | | | | |
| 21 | OPEB Trust | | | | | | | | | |
| 22 | | | | | | | | | | |
| 23 | Subtotal | | | (250,000) | | | | | | To below |
| 24 | Estimated Interest Earnings | \$6,039,527 | \$5,748,024 | \$6,221,112 | \$6,669,171 | \$6,669,171 | \$7,186,502 | \$7,659,728 | | |
| 25 | Ending Balance | \$15,099 | \$14,370 | \$15,553 | \$33,346 | \$33,346 | \$71,865 | \$76,597 | | |
| 26 | Minimum Balance (6.5 Weeks of Revenue Req.) | \$6,054,626 | \$5,762,394 | \$6,236,665 | \$6,702,517 | \$6,702,517 | \$7,258,367 | \$7,736,325 | | |
| 27 | | \$592,083 | \$611,485 | \$631,598 | \$655,218 | \$655,218 | \$680,040 | \$706,150 | | |
| 28 | Wastewater Capital Replacement Fund (721) | | | | | | | | | |
| 29 | Beginning Balance | \$1,362,084 | \$1,579,403 | \$1,269,901 | \$763,690 | \$763,690 | \$239,865 | (\$290,634) | | |
| 30 | Revenue | | | | | | | | | |
| 31 | Connection Fee Revenue | | | | | | | | | |
| 32 | Annual Depreciation | | | | | | | | | To Table 2 |
| 33 | Expenditures | | | | | | | | | |
| 34 | Capital Projects | | | | | | | | | |
| 35 | Transfer to/(from) | | | | | | | | | |
| 36 | Revenue Requirement | | | | | | | | | |
| 37 | Operations (720) | | | | | | | | | |
| 38 | | | | | | | | | | |
| 39 | Subtotal | | | | | | | | | From above |
| 40 | Estimated Interest Earnings | \$1,575,464 | \$1,266,734 | \$761,786 | \$238,672 | \$238,672 | (\$290,634) | (\$832,669) | | |
| 41 | Ending Balance | \$3,939 | \$3,167 | \$1,904 | \$1,193 | \$1,193 | \$0 | \$0 | | |
| 42 | Target Balance (1.5 X Average Annual CIP budget) | \$1,579,403 | \$1,269,901 | \$763,690 | \$239,865 | \$239,865 | (\$290,634) | (\$832,669) | | FY12-13 from Utilities GL - 8 |
| 43 | | \$1,101,350 | \$1,101,350 | \$1,101,350 | \$1,101,350 | \$1,101,350 | \$1,101,350 | \$1,101,350 | | |
| 44 | OPEB Trust | | | | | | | | | |
| 45 | Beginning Balance | \$ | \$ | 103,658 | \$ | 479,451 | \$ | 631,164 | \$ | 814,112 |
| 46 | Transfers To/From: | | | | | | | | | |
| 47 | Operations Fund 710 | \$ | \$ | 250,000 | \$ | \$ | \$ | \$ | \$ | \$ |
| 48 | Revenue Requirements | 103,400 | 124,597 | 150,139 | 180,918 | 180,918 | 218,006 | 262,697 | | From Above |
| 49 | | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | To Table 2 |
| 50 | Subtotal | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | |
| 51 | Estimated interest earnings | 258 | 1,196 | 1,574 | 2,030 | 2,030 | 2,580 | 3,243 | | |
| 52 | Ending Balance | \$0 | \$ | \$ | \$ | \$ | \$ | \$ | \$ | |
| 53 | Target Balance (Based on Cumulative Projected Liab.) | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | |
| 54 | | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | |

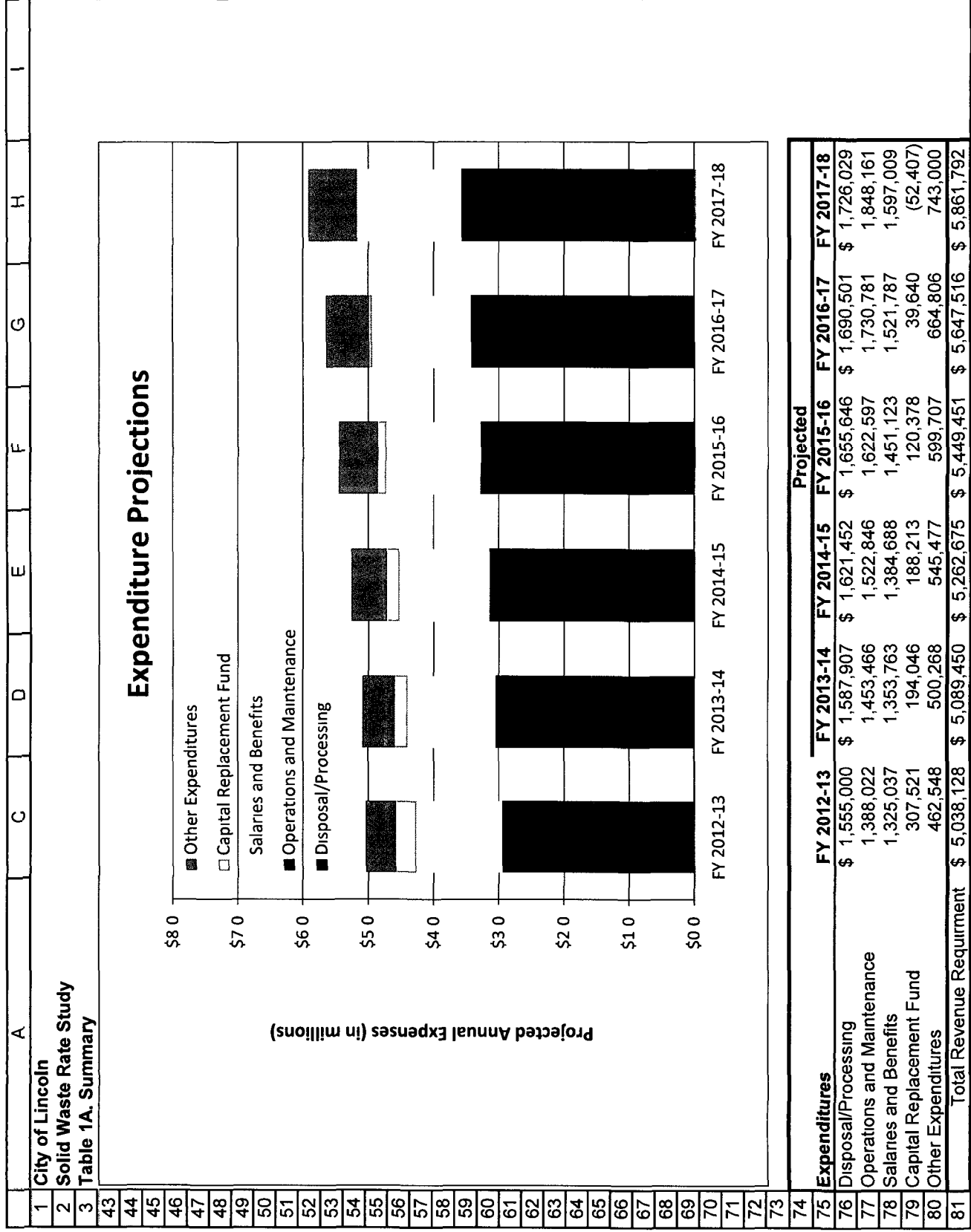
| | A | B | C | D | E | F | G | H | I | J |
|----|---|---------|-----------|-----------|-----------|-----------|-----------|-----------|-------------|------------------|
| 1 | City of Lincoln | | | | | | | | | |
| 2 | Wastewater Rate Study | | | | | | | | | |
| 3 | Table 5. Capital Improvements | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | Project | 2012/13 | 2013/14 | 2014/15 | 2015/16 | 2016/17 | 2017/18 | Total | Notes |
| 7 | Wastewater Non-ops Fund (725) | | | | | | | | | |
| 8 | Wastewater Main Extensions/Oversizing | 149 | | | | | | | \$0 | |
| 9 | New WWTFRF Oversizing | 159 | | | | | | | \$0 | |
| 10 | Wastewater Interceptor lines | 184 | | | | | | | \$0 | |
| 11 | Pump Station Upgrade | 303 | 60,000 | - | 60,000 | 61,800 | 60,000 | 60,000 | \$301,800 | From 5-Yr Budget |
| 12 | Existing System Repairs | 302 | 120,000 | - | 120,000 | 123,600 | 120,000 | 120,000 | \$603,600 | From 5-Yr Budget |
| 13 | Annual Depreciation | | | 700,000 | 700,000 | 700,000 | 700,000 | 700,000 | \$3,500,000 | Estimate |
| 14 | Subtotal | | \$180,000 | \$700,000 | \$880,000 | \$885,400 | \$880,000 | \$880,000 | \$4,405,400 | |
| 15 | | | | | | | | | | |
| 16 | | | | 2 6% | 5 2% | 7 8% | 10 6% | 13 4% | | From Table 1b |
| 17 | Total Inflated Cost | | \$180,000 | \$717,850 | \$925,452 | \$954,875 | \$973,252 | \$998,070 | \$4,749,499 | To Table 4 |
| 18 | | | | | | | | | | |
| 19 | Source City of Lincoln - Capital Improvement Projects Budget Detail | | | | | | | | | |
| 20 | | | | | | | | | | |
| 21 | | | | | | | | | | |
| 22 | | | | | | | | | | |

| | A | B | C | D | E | F | G | H | I | J |
|----|---------------------------|----------------|--------|-----------|-------------------------|----------------------|--------------------|-----------------------|----------------|----------------|
| 1 | City of Lincoln | | | | | | | | | |
| 2 | Wastewater Rate Study | | | | | | | | | |
| 3 | Table 6. Current Revenue | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | <u>Monthly Sewer Rate</u> | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | By Classification | # of Customers | # EDU | # New EDU | Service Unit Multiplier | Total Service Units | Total Mo Rate/Unit | Total Monthly Revenue | Annual Revenue | Notes |
| 8 | | | | | | | | | | |
| 9 | Residential | 16,270 | 16,449 | | 1 | 16,449 | \$ 32.08 | \$ 527,668 | \$ 6,332,015 | |
| 10 | Multi-Family | 92 | 617 | | 1 | 617 | \$ 32.08 | \$ 19,793 | \$ 237,520 | |
| 11 | Commercial and Industrial | 275 | 1,454 | | 1 | 1,454 | \$ 32.08 | \$ 46,644 | \$ 559,732 | |
| 12 | Out of City Limits | 6 | 6 | | 1 | 6 | \$ 48.12 | \$ 289 | \$ 3,465 | |
| 13 | Total | 16,643 | 18,526 | | | 18,526 | \$ 32.08 | \$ 594,298 | \$ 7,132,731 | |
| 14 | | | | | | | | | | Budgeted 12-13 |
| 15 | | | | | | Current Rate Revenue | \$32.08 | | 7,111,091 | Difference |
| 16 | | | | | | | | | 21,640 | |

| | A | B | C | D | E | F | G | H | I |
|----|---|---|---|---|---|---|---|---|---|
| 1 | City of Lincoln | | | | | | | | |
| 2 | Sewer Rate Study | | | | | | | | |
| 3 | Table 7. Capital Improvement Debt Service | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | |
| 6 | | | | | | | | | |
| 7 | Revenue Bond - 2000 | | | | | | | | |
| 8 | | | | | | | | | |
| 9 | | | | | | | | | |
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| 11 | | | | | | | | | |
| 12 | | | | | | | | | |
| 13 | | | | | | | | | |
| 14 | | | | | | | | | |

APPENDIX C. SOLID WASTE RATE MODEL





| | A | B | C | D | E | F | G | H | I | J |
|----|---|-------------------------------------|-----------|--------|--------|--------|--------|--------|-------------------------------------|------------|
| 1 | | City of Lincoln | | | | | | | | |
| 2 | | Solid Waste Rate Study | | | | | | | | |
| 3 | | Table 1B. General | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | a | Interest on Fund Balance | 0 25% | 0 25% | 0 25% | 0 50% | 1 00% | 1 00% | Estimate | To Table 4 |
| 8 | b | General Inflation | PW Budget | 3 0% | 3 0% | 3 0% | 3 0% | 3 0% | Per Public Works 5 Year Projections | To Table 2 |
| 9 | c | Labor/Benefit Increases | PW Budget | 2 2% | 2 3% | 4 8% | 4 9% | 4 9% | Per Public Works 5 Year Projections | To Table 2 |
| 10 | d | Growth in Customers | 100 | 100 | 100 | 100 | 100 | 100 | Estimate - Per City | To Table 6 |
| 11 | e | Total Customers (End of year) | 16,471 | 16,571 | 16,671 | 16,771 | 16,871 | 16,971 | From City's Billing System | To Table 6 |
| 12 | f | % Growth of Customers | | 0 6% | 0 6% | 0 6% | 0 6% | 0 6% | Calculated | To Table 6 |
| 13 | g | Bad Debt Expense | 0 5% | 0 5% | 0 5% | 0 5% | 0 5% | 0 5% | Estimate | To Table 3 |
| 14 | | | | | | | | | | |
| 15 | | Model Table Index | | | | | | | | |
| 16 | | Table 1A Summary | | | | | | | | |
| 17 | | Table 1B General | | | | | | | | |
| 18 | | Table 2 Revenue Requirement | | | | | | | | |
| 19 | | Table 3 Projected Revenue Increases | | | | | | | | |
| 20 | | Table 4 Reserves | | | | | | | | |
| 21 | | Table 5 Capital Purchases | | | | | | | | |
| 22 | | Table 6 Cost of Service Analysis | | | | | | | | |
| 23 | | | | | | | | | | |
| 24 | | | | | | | | | | |

| | A | B | C | D | E | F | G | H | I | J | K |
|----|------------------------------------|-----------------------------|---|---|-----------|-------------|-------------|-------------|-------------|-------------|---|
| 1 | City of Lincoln | | | | | | | | | | |
| 2 | Solid Waste Rate Study | | | | | | | | | | |
| 3 | Table 2 Revenue Requirement | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | Table 1b | | | | | | | | | | |
| 6 | Factors | | | | | | | | | | |
| 7 | Operating Expenses (6865) | | | | | | | | | | |
| 8 | Salaries and Benefits - Operations | | | | | | | | | | |
| 9 | 40000 | Full Time | | c | 589,539 | 589,539 | 589,539 | 607,225 | 625,442 | 644,205 | |
| 10 | 44000 | Overtime | | c | 37,925 | 37,925 | 37,925 | 39,063 | 40,235 | 41,442 | |
| 11 | 43000 | Part Time | | c | 22,661 | 22,661 | 22,661 | 23,341 | 24,041 | 24,762 | |
| 12 | 40500 | On-call | | c | 2,563 | 2,563 | 2,563 | 2,639 | 2,719 | 2,800 | |
| 13 | 40550 | Safety | | c | - | - | - | - | - | - | |
| 14 | 48050 | Retirement | | c | 111,490 | 119,294 | 127,645 | 140,410 | 154,451 | 169,896 | |
| 15 | 48060 | Workers Comp | | c | 35,014 | 35,014 | 35,014 | 36,065 | 37,147 | 38,261 | |
| 16 | 48070 | Medical / Dental / Life Ins | | c | 131,941 | 142,497 | 153,897 | 166,208 | 179,505 | 193,865 | |
| 17 | 48070 | SUI | | c | 5,957 | 5,957 | 5,957 | 6,135 | 6,319 | 6,509 | |
| 18 | 48085 | SDI Employer | | c | 5,222 | 5,222 | 5,222 | 5,222 | 5,222 | 5,222 | |
| 19 | 48090 | FICA | | c | 50,340 | 50,340 | 50,340 | 51,850 | 53,406 | 55,008 | |
| 20 | 48095 | Def Comp | | c | - | - | - | - | - | - | |
| 21 | Subtotal, Salaries and Benefits | | | | | | | | | | |
| 22 | | | | | \$992,652 | \$1,011,011 | \$1,030,762 | \$1,078,158 | \$1,128,485 | \$1,181,970 | |
| 23 | 40000 | Full Time | | c | 181,224 | 181,224 | 181,224 | 186,661 | 192,261 | 198,028 | |
| 24 | 44000 | Overtime | | c | 1,025 | 1,025 | 1,025 | 1,056 | 1,087 | 1,120 | |
| 25 | 43000 | Part Time | | c | - | - | - | - | - | - | |
| 26 | 40500 | On-call | | c | - | - | - | - | - | - | |
| 27 | 40550 | Safety | | c | - | - | - | - | - | - | |
| 28 | 48050 | Retirement | | c | 31,110 | 33,287 | 35,618 | 39,179 | 43,097 | 47,407 | |
| 29 | 48060 | Workers Comp | | c | 777 | 777 | 777 | 800 | 824 | 849 | |
| 30 | 48070 | Medical / Dental / Life Ins | | c | 102,359 | 110,548 | 119,392 | 128,943 | 139,258 | 150,399 | |
| 31 | 48070 | SUI | | c | 1,354 | 1,354 | 1,354 | 1,395 | 1,436 | 1,480 | |
| 32 | 48085 | SDI Employer | | c | 1,384 | 1,384 | 1,384 | 1,384 | 1,384 | 1,384 | |
| 33 | 48090 | FICA | | c | 13,153 | 13,153 | 13,153 | 13,547 | 13,954 | 14,372 | |
| 34 | 48095 | Def Comp | | c | - | - | - | - | - | - | |
| 35 | Subtotal, Salaries and Benefits | | | | | | | | | | |
| 36 | | | | | \$332,386 | \$342,752 | \$353,926 | \$372,965 | \$393,302 | \$415,039 | |
| 37 | Operating Costs | | | | | | | | | | |
| 38 | 50101 | Office Expense | | b | 667 | 674 | 680 | 687 | 694 | 701 | |
| 39 | 50111 | Insurance | | b | 19,876 | 21,267 | 22,756 | 24,349 | 26,053 | 27,877 | |
| 40 | 50140 | Materials / Supplies | | b | 69,487 | 71,572 | 73,719 | 75,930 | 78,208 | 80,554 | |
| 41 | 50150 | Fuel & Oil | | b | 176,220 | 192,080 | 209,367 | 228,210 | 248,749 | 271,136 | |
| 42 | 50190 | Clothing | | b | 9,475 | 9,570 | 9,665 | 9,762 | 9,860 | 9,958 | |
| 43 | 50220 | Advertising | | b | 15,000 | 15,150 | 15,302 | 15,455 | 15,609 | 15,765 | |
| 44 | 50250 | Communications | | b | 6,414 | 6,606 | 6,805 | 7,009 | 7,219 | 7,436 | |
| 45 | 50270 | Equipment Maintenance | | b | 50,000 | 51,500 | 53,045 | 54,636 | 56,275 | 57,964 | |
| 46 | 50280 | Building Maintenance | | b | - | - | - | - | - | - | |
| 47 | 50310 | Utilities | | b | - | - | - | - | - | - | |
| 48 | 50320 | Taxes | | b | 103 | 103 | 103 | 103 | 103 | 103 | |
| 49 | 50350 | Lease Expense | | b | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | |

| | A | B | C | D | E | F | G | H | I | J | K |
|----|---|---|---|---|---|---|---|---|---|---|---|
| 1 | City of Lincoln | | | | | | | | | | |
| 2 | Solid Waste Rate Study | | | | | | | | | | |
| 3 | Table 2 Revenue Requirement | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 50 | 50400 Professional Services | | | | | | | | | | |
| 51 | 50500 Membership / Dues | | | | | | | | | | |
| 52 | 50530 Travel | | | | | | | | | | |
| 53 | 50540 Training | | | | | | | | | | |
| 54 | 50710 Regulatory Fees | | | | | | | | | | |
| 55 | 57305 WPMMA MRF Fees | | | | | | | | | | |
| 56 | 57315 AB 939 Compliance | | | | | | | | | | |
| 57 | 60000 Depreciation | | | | | | | | | | |
| 58 | 80050 Equipment | | | | | | | | | | |
| 59 | | | | | | | | | | | |
| 60 | | | | | | | | | | | |
| 62 | Non-Operating Costs | | | | | | | | | | |
| 63 | 65100 Cost Allocation - General Fund | | | | | | | | | | |
| 64 | 65610 Cost Allocation - Fleet | | | | | | | | | | |
| 65 | | | | | | | | | | | |
| 66 | | | | | | | | | | | |
| 67 | Total Op and Non-Op Expenses | | | | | | | | | | |
| 68 | | | | | | | | | | | |
| 69 | Transfers To/(From) Reserves | | | | | | | | | | |
| 70 | Operations (720) | | | | | | | | | | |
| 71 | Capital Replacement Fund (721) - Budget | | | | | | | | | | |
| 72 | Corp Yard/City Hall Bond Pmt | | | | | | | | | | |
| 73 | OPEB Fund | | | | | | | | | | |
| 74 | Landfill Maintenance Costs | | | | | | | | | | |
| 75 | Unfunded Landfill Closure | | | | | | | | | | |
| 76 | Subtotal, Transfers | | | | | | | | | | |
| 77 | | | | | | | | | | | |
| 78 | Net Revenue Requirement | | | | | | | | | | |
| 79 | Annual Increases | | | | | | | | | | |
| 80 | | | | | | | | | | | |

Table 1b

Factors

Projected

FY 2012-13

FY 2013-14

FY 2014-15

FY 2015-16

FY 2016-17

FY 2017-18

Notes

FY 2012-13

FY 2013-14

FY 2014-15

FY 2015-16

FY 2016-17

FY 2017-18

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FY 2012-13

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FY 2014-15

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FY 2014-15

FY 2015-16

FY 2016-17

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FY 2012-13

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FY 2014-15

FY 2015-16

FY 2016-17

| | A | B | C | D | E | F | G | H | I | J | K |
|----|--------------------------------------|---|---|---|---|---|---|---|---|---|---|
| 1 | City of Lincoln | | | | | | | | | | |
| 2 | Solid Waste Rate Study | | | | | | | | | | |
| 3 | Table 3. Projected Revenue Increases | | | | | | | | | | |
| 4 | | | | | | | | | | | |
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| 28 | | | | | | | | | | | |
| 29 | | | | | | | | | | | |

| Table 1B | | | | | | | | | | | |
|----------|---------------|---------------|---------------|---------------|---------------|---------------|--|--|--|--|--|
| Factors | | | | | | | | | | | |
| | FY 2012-13 | FY 2013-14 | FY 2014-15 | FY 2015-16 | FY 2016-17 | FY 2017-18 | Notes | | | | |
| f | \$4,781,873 | \$4,810,905 | \$4,839,938 | \$4,868,970 | \$4,898,002 | \$4,927,034 | FY 2012/13 actual revenue, remaining years adjusted for growth | | | | |
| g | (\$23,909) | (\$24,055) | (\$24,200) | (\$24,345) | (\$24,490) | (\$24,635) | | | | | |
| | \$4,757,964 | \$4,786,851 | \$4,815,738 | \$4,844,625 | \$4,873,512 | \$4,902,399 | | | | | |
| | (\$5,038,128) | (\$5,089,450) | (\$5,262,675) | (\$5,449,451) | (\$5,647,516) | (\$5,861,792) | From Table 2 | | | | |
| | (\$280,164) | (\$302,599) | (\$446,937) | (\$604,827) | (\$774,004) | (\$959,393) | | | | | |
| | 0.0% | 6.0% | 6.0% | 5.0% | 5.0% | 5.0% | | | | | |
| | 0.0% | 3.6% | 13.7% | 20.1% | 26.9% | 34.0% | | | | | |
| | \$4,757,964 | \$4,786,851 | \$4,815,738 | \$4,844,625 | \$4,873,512 | \$4,902,399 | | | | | |
| | | \$143,606 | \$288,944 | \$290,677 | \$292,411 | \$294,144 | | | | | |
| | | | \$306,281 | \$308,118 | \$309,955 | \$311,793 | | | | | |
| | | | | \$272,171 | \$273,794 | \$275,417 | | | | | |
| | | | | | \$287,484 | \$289,188 | | | | | |
| | | | | | | \$303,647 | | | | | |
| | \$0 | \$143,606 | \$595,225 | \$870,967 | \$1,163,644 | \$1,474,188 | | | | | |
| | \$4,757,964 | \$4,930,456 | \$5,410,963 | \$5,715,591 | \$6,037,155 | \$6,376,586 | | | | | |
| | (\$5,038,128) | (\$5,089,450) | (\$5,262,675) | (\$5,449,451) | (\$5,647,516) | (\$5,861,792) | From Table 2 | | | | |
| | (\$280,164) | (\$158,994) | \$148,288 | \$266,140 | \$389,639 | \$514,794 | | | | | |

| | A | B | C | D | E | F | G | H | I | J |
|----|---|---|---|---|---|---|---|---|---|---|
| 1 | City of Lincoln | | | | | | | | | |
| 2 | Solid Waste Rate Study | | | | | | | | | |
| 3 | Table 4 Reserves | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | Solid Waste Operations Fund (730) | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| 11 | | | | | | | | | | |
| 12 | Beginning Balance | | | | | | | | | |
| 13 | Surplus/(Deficit) | | | | | | | | | |
| 14 | | | | | | | | | | |
| 15 | Revenue | | | | | | | | | |
| 16 | Waste Haulers Franchise Fees | | | | | | | | | |
| 17 | Misc Revenue | | | | | | | | | |
| 18 | | | | | | | | | | |
| 19 | Subtotal | | | | | | | | | |
| 20 | Transfer (to)/from | | | | | | | | | |
| 21 | Revenue Requirement | | | | | | | | | |
| 22 | Capital replacement (731) | | | | | | | | | |
| 23 | OPEB Trust | | | | | | | | | |
| 24 | | | | | | | | | | |
| 25 | Subtotal | | | | | | | | | |
| 26 | Estimated Interest Earnings a | | | | | | | | | |
| 27 | Ending Balance | | | | | | | | | |
| 28 | Minimum Balance (6 5 Weeks of Revenue Req) | | | | | | | | | |
| 29 | Solid Waste Capital Replacement Fund (731) | | | | | | | | | |
| 30 | Beginning Balance | | | | | | | | | |
| 31 | Revenue | | | | | | | | | |
| 32 | | | | | | | | | | |
| 33 | | | | | | | | | | |
| 34 | Expenditures | | | | | | | | | |
| 35 | Capital Projects - Vehicle Purchases | | | | | | | | | |
| 36 | Transfer (to)/from | | | | | | | | | |
| 37 | Revenue Requirement - Per City Budget | | | | | | | | | |
| 38 | Operations (730) | | | | | | | | | |
| 39 | | | | | | | | | | |
| 40 | Subtotal | | | | | | | | | |
| 41 | Estimated Interest Earnings a | | | | | | | | | |
| 42 | Ending Balance | | | | | | | | | |
| 43 | Target Balance (1 25 X Avg Annual Purchases) | | | | | | | | | |
| 44 | OPEB Trust | | | | | | | | | |
| 45 | Beginning Balance | | | | | | | | | |
| 46 | Transfer (to)/from | | | | | | | | | |
| 47 | Operations Fund 730 | | | | | | | | | |
| 48 | Revenue Requirements | | | | | | | | | |
| 49 | | | | | | | | | | |
| 50 | Subtotal | | | | | | | | | |
| 51 | Estimated interest earnings a | | | | | | | | | |
| 52 | Ending Balance | | | | | | | | | |
| 53 | Target Balance (Based on Cumulative Proj Liab) | | | | | | | | | |

| | A | B | C | D | E | F | G | H |
|----|---|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| 1 | City of Lincoln | | | | | | | |
| 2 | Solid Waste Rate Study | | | | | | | |
| 3 | Table 5 Capital Purchases | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | Collection Vehicles | | | | | | | |
| 8 | Residential Sideloader - Veh #720 | \$260,000 | | | | | | |
| 9 | Residential Sideloader - Veh #726 | \$260,000 | | | | | | |
| 10 | Residential Sideloader - Veh #727 | | \$267,800 | | | | | |
| 11 | Residential Sideloader - Veh #728 | | \$267,800 | | | | | |
| 12 | Residential Sideloader - Veh #729 | | | \$275,834 | | | | |
| 13 | Residential Sideloader - Veh #730 | | | \$275,834 | | | | |
| 14 | Residential Sideloader - Veh #731 | | | | \$284,109 | | | |
| 15 | Residential Sideloader - Veh #732 | | | | | \$292,632 | | |
| 16 | Residential Sideloader - Veh #734 | | | | | \$292,632 | | |
| 17 | Residential Sideloader - Veh #735 | | | | | | \$301,411 | |
| 18 | Commercial Front-end Loader - Veh #722 | \$260,000 | | | | | | |
| 19 | Commercial Front-end Loader - Veh #724 | | \$267,800 | | | | | |
| 20 | | | | | | | | |
| 21 | Containers | | | | | | | |
| 22 | Carts | \$15,000 | \$15,000 | \$15,000 | \$15,000 | \$15,000 | \$15,000 | |
| 23 | Bins | - | - | - | - | - | - | |
| 24 | | | | | | | | |
| 28 | Subtotal | \$795,000 | \$818,400 | \$566,668 | \$299,109 | \$600,265 | \$316,411 | To Table 4 |
| 29 | | | | | | | | |
| 30 | | | | | | | | |
| 31 | Source City of Lincoln - Capital Replacement Budget | | | | | | | |
| 32 | | | | | | | | |
| 33 | | | | | | | | |
| 34 | | | | | | | | |

| | A | B | C | D | E | F | G | H | I | J |
|----|---|-----------------------------|---|-------------|-------------|-------|-------|-----------|-----------|-------------|
| 1 | City of Lincoln | | | | | | | | | |
| 2 | Solid Waste Rate Study | | | | | | | | | |
| 3 | Table 6. Cost of Service Analysis | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | Operating Expenses (6865) | | | | | | | | | |
| 7 | Salaries and Benefits - Operations | | | | | | | | | |
| 8 | 40000 | Full Time | | 589,539 | Route Labor | 71 2% | 28 8% | \$419,644 | \$169,894 | \$589,539 |
| 9 | 44000 | Overtime | | 37,925 | Route Labor | 71 2% | 28 8% | \$26,996 | \$10,929 | 37,925 |
| 10 | 43000 | Part Time | | 22,661 | Route Labor | 71 2% | 28 8% | \$16,130 | \$6,530 | 22,661 |
| 11 | 40500 | On-call | | 2,563 | Route Labor | 71 2% | 28 8% | \$1,824 | \$738 | 2,563 |
| 12 | 48050 | Retirement | | 119,294 | Route Labor | 71 2% | 28 8% | \$84,916 | \$34,378 | 119,294 |
| 13 | 48060 | Workers Comp | | 35,014 | Route Labor | 71 2% | 28 8% | \$24,924 | \$10,091 | 35,014 |
| 14 | 48070 | Medical / Dental / Life Ins | | 142,497 | Route Labor | 71 2% | 28 8% | \$101,432 | \$41,065 | 142,497 |
| 15 | 48070 | SUI | | 5,957 | Route Labor | 71 2% | 28 8% | \$4,240 | \$1,717 | 5,957 |
| 16 | 48085 | SDI Employer | | 5,222 | Route Labor | 71 2% | 28 8% | \$3,717 | \$1,505 | 5,222 |
| 17 | 48090 | FICA | | 50,340 | Route Labor | 71 2% | 28 8% | \$35,833 | \$14,507 | 50,340 |
| 18 | Subtotal, Salaries and Benefits - Ops | | | \$1,011,011 | | | | \$719,656 | \$291,355 | \$1,011,011 |
| 19 | Salaries and Benefits - Administrative | | | | | | | | | |
| 20 | 40000 | Full Time | | 181,224 | Accounts | 98 1% | 1 9% | \$177,776 | \$3,448 | 181,224 |
| 21 | 44000 | Overtime | | 1,025 | Accounts | 98 1% | 1 9% | \$1,005 | \$20 | 1,025 |
| 22 | 48050 | Retirement | | 33,287 | Accounts | 98 1% | 1 9% | \$32,654 | \$633 | 33,287 |
| 23 | 48060 | Workers Comp | | 777 | Accounts | 98 1% | 1 9% | \$762 | \$15 | 777 |
| 24 | 48070 | Medical / Dental / Life Ins | | 110,548 | Accounts | 98 1% | 1 9% | \$108,444 | \$2,103 | 110,548 |
| 25 | 48070 | SUI | | 1,354 | Accounts | 98 1% | 1 9% | \$1,328 | \$26 | 1,354 |
| 26 | 48085 | SDI Employer | | 1,384 | Accounts | 98 1% | 1 9% | \$1,358 | \$26 | 1,384 |
| 27 | 48090 | FICA | | 13,153 | Accounts | 98 1% | 1 9% | \$12,903 | \$250 | 13,153 |
| 28 | 48095 | Def Comp | | - | Accounts | 98 1% | 1 9% | \$0 | \$0 | - |
| 29 | Subtotal, Salaries and Benefits - Admin | | | \$342,752 | | | | \$336,231 | \$6,521 | \$342,752 |
| 30 | Operating Costs | | | | | | | | | |
| 31 | 50101 | Office Expense | | 674 | Accounts | 98 1% | 1 9% | \$661 | \$13 | 674 |
| 32 | 50111 | Insurance | | 21,267 | Routes | 82 4% | 17 6% | \$17,529 | \$3,739 | 21,267 |
| 33 | 50140 | Materials / Supplies | | 71,572 | Routes | 82 4% | 17 6% | \$58,990 | \$12,582 | 71,572 |
| 34 | 50150 | Fuel & Oil | | 192,080 | Routes | 82 4% | 17 6% | \$158,314 | \$33,766 | 192,080 |
| 35 | 50190 | Clothing | | 9,570 | Routes | 82 4% | 17 6% | \$7,887 | \$1,682 | 9,570 |
| 36 | 50220 | Advertising | | 15,150 | Accounts | 98 1% | 1 9% | \$14,862 | \$288 | 15,150 |

| | A | B | C | D | E | F | G | H | I | J |
|----|-------|--------------------------------|---|-------------|---------------------------------|-------|--------------------|-------------|------------|-------------|
| 39 | 50250 | Communications | | 6,606 | Routes | 82 4% | 17 6% | \$5,445 | \$1,161 | 6,606 |
| 40 | 50270 | Equipment Maintenance | | 51,500 | Routes | 82 4% | 17 6% | \$42,447 | \$9,053 | 51,500 |
| 41 | 50320 | Taxes | | 103 | Routes | 82 4% | 17 6% | \$85 | \$18 | 103 |
| 42 | 50350 | Lease Expense | | 100,000 | Accounts | 98 1% | 1 9% | \$98,097 | \$1,903 | 100,000 |
| 43 | 50400 | Professional Services | | 236,008 | Accounts | 98 1% | 1 9% | \$231,518 | \$4,490 | 236,008 |
| 44 | 50500 | Membership / Dues | | 657 | Accounts | 98 1% | 1 9% | \$644 | \$12 | 657 |
| 45 | 50540 | Training | | 4,893 | Routes | 82 4% | 17 6% | \$4,032 | \$860 | 4,893 |
| 46 | 50710 | Regulatory Fees | | 22,454 | Routes | 82 4% | 17 6% | \$18,507 | \$3,947 | 22,454 |
| 47 | 57305 | Disposal Fees | | 1,587,907 | Tonnage | 76 0% | 24 0% | \$1,207,372 | \$380,535 | 1,587,907 |
| 48 | 60000 | Depreciation | | 33,987 | Routes | 82 4% | 17 6% | \$28,012 | \$5,975 | 33,987 |
| 49 | 80050 | Equipment | | 5,150 | Routes | 82 4% | 17 6% | \$4,245 | \$905 | 5,150 |
| 50 | | Subtotal, Operating Costs | | \$2,359,577 | | | | \$1,898,648 | \$460,929 | \$2,359,577 |
| 51 | | | | | | | | | | |
| 52 | | | | | | | | | | |
| 53 | | Non-Operating Costs | | | | | | | | |
| 54 | 65100 | Cost Allocation - General Fund | | 430,814 | Accounts | 98 1% | 1 9% | \$422,617 | \$8,197 | 430,814 |
| 55 | 65610 | Cost Allocation - Fleet | | 250,983 | Routes | 82 4% | 17 6% | \$206,862 | \$44,120 | 250,983 |
| 56 | | Subtotal, Non-Operating | | \$681,796 | | | | \$629,479 | \$52,317 | \$681,796 |
| 57 | | | | | | | | | | |
| 58 | | Total Op and Non-Op Expenses | | \$4,395,136 | | | | \$3,584,014 | \$811,122 | \$4,395,136 |
| 59 | | | | | | | | | | |
| 60 | | Transfers To/(From) Reserves | | | | | | | | |
| 61 | | Capital Replacement Fund (721) | | 194,046 | Routes | 82 4% | 17 6% | \$159,935 | \$34,111 | 194,046 |
| 62 | | Corp Yard/City Hall Bond Pmt | | 159,713 | Accounts | 98 1% | 1 9% | \$156,674 | \$3,039 | 159,713 |
| 63 | | OPEB Fund | | 214,376 | Route Labor | 71 2% | 28 8% | \$152,596 | \$61,779 | 214,376 |
| 64 | | Landfill Maintenance Costs | | 126,179 | Tonnage | 76 0% | 24 0% | \$95,941 | \$30,238 | 126,179 |
| 65 | | Total Transfers | | 694,314 | | | | 565,146 | \$129,167 | 694,314 |
| 66 | | | | | | | | | | |
| 67 | | Net Revenue Requirement | | \$5,089,450 | | | Allocated Expenses | \$4,149,161 | \$940,290 | \$5,089,450 |
| 68 | | | | | | | | | | |
| 69 | | | | | Annual Revenue at Current Rates | | | \$3,898,899 | \$882,974 | |
| 70 | | | | | Less Bad Debt | | | (\$19,494) | (\$4,415) | |
| 71 | | | | | Net Revenue | | | \$3,879,405 | \$878,559 | \$4,757,964 |
| 72 | | | | | | | | | | |
| 73 | | | | | \$ Surplus/(Shortfall) | | | (\$269,756) | (\$61,730) | (\$331,486) |
| 74 | | | | | % Surplus/(Shortfall) | | | -7.0% | -7.0% | -7.0% |